AB7000 Series
User Guide

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Acer AB 7000 Series
User Guide

Acer AB 7000

Model Number : ______________________

Serial Number: ______________________

Purchase Date: ______________________

Place of Purchase: ______________________

Information for your safety and comfort

Safety instructions

Read these instructions carefully. Keep this document for future reference. Follow all warnings and instructions marked on the product.

Turning the product off before cleaning

Unplug this product from the wall outlet before cleaning. Do not use liquid cleaners or aerosol cleaners. Use a damp cloth for cleaning.

CAUTION for plug as disconnecting device

Observe the following guidelines when connecting and disconnecting power to the power supply unit:

- Install the power supply unit before connecting the power cord to the AC power outlet.
- Unplug the power cord before removing the power supply unit from the computer.
- If the system has multiple sources of power, disconnect power from the system by unplugging all power cords from the power supplies.

CAUTION for accessibility

Be sure that the power outlet you plug the power cord into is easily accessible and located as close to the equipment operator as possible. When you need to disconnect power to the equipment, be sure to unplug the power cord from the electrical outlet.

Warnings

- Do not use this product near water.
- Do not place this product on an unstable cart, stand or table. If the product falls, it could be seriously damaged.

- Slots and openings are provided for ventilation to ensure reliable operation of the product and to protect it from overheating. These openings must not be blocked or covered. The openings should never be blocked by placing the product on a bed, sofa, rug or other similar surface. This product should never be placed near or over a radiator or heat register, or in a built-in installation unless proper ventilation is provided.
- Never push objects of any kind into this product through cabinet slots as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind onto or into the product.
- To avoid damage of internal components and to prevent battery leakage, do not place the product on a vibrating surface.
- Never use it under sporting, exercising, or any vibrating environment which will probably cause unexpected short current or damage rotor devices, HDD, Optical drive, and even exposure risk from lithium battery pack.
- This product is not suitable for use with visual display workplace devices according to B2 of the German Ordinance for Work with Visual Display Units.

Using electrical power

- This product should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- Do not allow anything to rest on the power cord. Do not locate this product where people will walk on the cord.
- If an extension cord is used with this product, make sure that the total ampere rating of the equipment plugged into the extension cord does not exceed the extension cord ampere rating. Also, make sure that the total rating of all products plugged into the wall outlet does not exceed the fuse rating.
- Do not overload a power outlet, strip or receptacle by plugging in too many devices. The overall system load must not exceed 80% of the branch circuit rating. If power strips are used, the load should not exceed 80% of the power strip's input rating.
- This product's power supply is equipped with a three-wire grounded plug. The plug only fits in a grounded power outlet. Make sure the power outlet is properly grounded before inserting the power supply plug. Do not insert the plug into a non-

grounded power outlet. Contact your electrician for details.

Warning! The grounding pin is a safety feature. Using a power outlet that is not properly grounded may result in electric shock and/or injury.

Note: The grounding pin also provides good protection from unexpected noise produced by other nearby electrical devices that may interfere with the performance of this product.

- Use the product only with the supplied power supply cord set. If you need to replace the power cord set, make sure that the new power cord meets the following requirements: detachable type, UL listed/CSA certified, VDE approved or its equivalent, 4.6 meters (15 feet) maximum length.

Product servicing

Do not attempt to service this product yourself, as opening or removing covers may expose you to dangerous voltage points or other risks. Refer all servicing to qualified service personnel.

Unplug this product from the wall outlet and refer servicing to qualified service personnel when:

- the power cord or plug is damaged, cut or frayed
- liquid was spilled into the product
- the product was exposed to rain or water
- the product has been dropped or the case has been damaged
- the product exhibits a distinct change in performance, indicating a need for service
- the product does not operate normally after following the operating instructions

Note: Adjust only those controls that are covered by the operating instructions, since improper adjustment of other controls may result in damage and will often require extensive work by a qualified technician to restore the product to normal condition.

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer’s instructions.

Additional safety information

Your device and its enhancements may contain small parts. Keep them out of the reach of small children.

Disposal instructions

Do not throw this electronic device into the trash when discarding. To minimize pollution and ensure utmost protection of the global environment, please recycle. For more information on the Waste from Electrical and Electronics Equipment (WEEE) regulations, visit **http://www.acer-group.com/public/Sustainability/sustainability01.htm.**

Mercury advisory

For projectors or electronic products containing an LCD/CRT monitor or display: Lamp(s) inside this product contain mercury and must be recycled or disposed of according to local, state or federal laws. For more information, contact the Electronic Industries Alliance at www.eiae.org. For lamp-specific disposal information, check www.lamprecycle.org.

Tips and information for comfortable use

Computer users may complain of eyestrin and headaches after prolonged use. Users are also at risk of physical injury after long hours of working in front of a computer. Long work periods, bad posture, poor work habits, stress, inadequate working conditions, personal health and other factors greatly increase the risk of physical injury.

Incorrect computer usage may lead to carpal tunnel syndrome, tendonitis, tenosynovitis or other musculoskeletal disorders. The following symptoms may appear in the hands, wrists, arms, shoulders, neck or back:

- numbness, or a burning or tingling sensation
- aching, soreness or tenderness
- pain, swelling or throbbing
- stiffness or tightness
- coldness or weakness

If you have these symptoms, or any other recurring or persistent discomfort and/or pain related to computer use, consult a physician immediately and inform your company's health and safety department.

The following section provides tips for more comfortable computer use.

Finding your comfort zone

Find your comfort zone by adjusting the viewing angle of the monitor, using a footrest, or raising your sitting height to achieve maximum comfort. Observe the following tips:

- refrain from staying too long in one fixed posture
- avoid slouching forward and/or leaning backward
- stand up and walk around regularly to remove the strain on your leg muscles
- take short rests to relax your neck and shoulders
- avoid tensing your muscles or shrugging your shoulders
- install the external display, keyboard and mouse properly and within comfortable reach
- if you view your monitor more than your documents, place the display at the center of your desk to minimize neck strain

Taking care of your vision

Long viewing hours, wearing incorrect glasses or contact lenses, glare, excessive room lighting, poorly focused screens, very small typefaces and low-contrast displays could stress your eyes. The following sections provide suggestions on how to reduce eyestrain.

Eyes

- Rest your eyes frequently.
- Give your eyes regular breaks by looking away from the monitor and focusing on a distant point.
- Blink frequently to keep your eyes from drying out.

Display

- Keep your display clean.

- Keep your head at a higher level than the top edge of the display so your eyes point downward when looking at the middle of the display.
- Adjust the display brightness and/or contrast to a comfortable level for enhanced text readability and graphics clarity.
- Eliminate glare and reflections by:
  - placing your display in such a way that the side faces the window or any light source
  - minimizing room light by using drapes, shades or blinds
  - using a task light
  - changing the display's viewing angle
  - using a glare-reduction filter
  - using a display visor, such as a piece of cardboard extended from the display's top front edge
- Avoid adjusting your display to an awkward viewing angle.
- Avoid looking at bright light sources, such as open windows, for extended periods of time.

Developing good work habits

Develop the following work habits to make your computer use more relaxing and productive:

- Take short breaks regularly and often.
- Perform some stretching exercises.
- Breathe fresh air as often as possible.
- Exercise regularly and maintain a healthy body.

Warning! We do not recommend using the computer on a couch or bed. If this is unavoidable, work for only short periods, take breaks regularly, and do some stretching exercises.

Regulations and safety notices

FCC notice

This device has been tested and found to comply with the limits for a Class A digital device pursuant to Part 15 of the FCC rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This device generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications.

However, there is no guarantee that interference will not occur in a particular installation. If this device does cause harmful interference to radio or television reception, which can be determined by turning the device off and on, the
user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the device and receiver.
- Connect the device into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/television technician for help.

Notice: Shielded cables

All connections to other computing devices must be made using shielded cables to maintain compliance with FCC regulations. In compliance with FCC regulations, use shielded cables to connect to other computing devices. A dual-link cable is recommended for DVI output.

Notice: Peripheral devices

Only peripherals (input/output devices, terminals, printers, etc.) certified to comply with the Class A limits may be attached to this equipment. Operation with non-certified peripherals is likely to result in interference to radio and TV reception.

Caution

Changes or modifications not expressly approved by the manufacturer could void the user's authority, which is granted by the Federal Communications Commission, to operate this computer.

Operation conditions

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Notice: Canadian users

This Class A digital apparatus complies with Canadian ICES-003.

Remarque à l'intention des utilisateurs canadiens

Cet appareil numérique de la classe B est conforme a la norme NMB-003 du Canada.

ME61

Compliant with Russian regulatory certification

Notice for Australia

For safety reasons, only connect headsets with a telecommunications compliance label. This includes customer equipment previously labelled permitted or certified.

Notice for New Zealand

1 The grant of a Telepermit for any item of terminal equipment indicates only that Telecom has accepted that the item complies with minimum conditions for connection to its network. It indicates no endorsement of the product by Telecom, nor does it provide any sort of warranty. Above all, it provides no assurance that any item will work correctly in all respects with another item of Telepermitted equipment of a different make or model, nor does it imply that any product is compatible with all of Telecom's network services.

2 This equipment is not capable, under all operating conditions, of correct operation at the higher speeds for which it is designed. Telecom will accept no responsibility should difficulties arise in such circumstances.

3 Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. The associated equipment shall be set

to operate within the following limits for compliance with Telecom's Specifications:

a There shall be no more than 10 call attempts to the same number within any 30 minute period for any single manual call initiation, and

b The equipment shall go on-hook for a period of not less than 30 seconds between the end of one attempt and the beginning of the next call attempt.

4 Some parameters required for compliance with Telecom's Telepermit requirements are dependent on the equipment (PC) associated with this device. In order to operate within the limits for compliance with Telecom's specifications, the associated equipment shall be set to ensure that automatic calls to different numbers are spaced such that there is not less than 5 seconds between the end of one call attempt and the beginning of another.

5 This equipment shall not be set up to make automatic calls to Telecom's 111 Emergency Service.

6 This device is equipped with pulse dialing while the Telecom standard is DTMF tone dialing. There is no guarantee that Telecom lines will always continue to support pulse dialing.

7 Use of pulse dialing, when this equipment is connected to the same line as other equipment, may give rise to bell tinkle or noise and may also cause a false answer condition. Should such problems occur, the user should NOT contact the telecom Fault Service.

8 This equipment may not provide for the effective hand-over of a call to another device connected to the same line.

9 Under power failure conditions this appliance may not operate. Please ensure that a separate telephone, not dependent on local power, is available for emergency use.

Laser compliance statement

The CD or DVD drive used with this computer is a laser product.
The CD or DVD drive's classification label (shown below) is located on the drive.

CLASS 1 LASER PRODUCT
CAUTION: INVISIBLE LASER RADIATION WHEN OPEN. AVOID EXPOSURE
TO BEAM.

Appareil à laser de classe 1
Attention : Radiation laser visible et invisible en cas d’ouverture. Éviter toute exposition aux rayons.

Laserprodukt der Klasse 1
Achtung: Beim Öffnen werden unsichtbare Laserstrahlen freigelegt. Setzen Sie sich diesen Strahlen nicht aus.

Prodotto laser di classe 1
Attenzione: Radiazioni laser invisibili in caso d’apertura. Evitare l’esposizione ai raggi.

Producto láser de Clase 1
Precaución: Cuando está abierta, hay radiación láser. Evite una exposición al haz de luz.

Produto Laser de Classe 1
Precaução: Radiação laser invisível quando aberto. Evite exposição ao feixe.

Laserproduct klasse 1
Voorzichtig: Onzichtbare laserstraling indien geopend. Voorkom blootstelling aan straal.

Declaration of Conformity for EU countries

Hereby, Acer, declares that this system is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

List of applicable countries

This device must be used in strict accordance with the regulations and constraints in the country of use. For further information, please contact local office in the country of use. Please see **http://ec.europa.eu/enterprise/rtte/implem.htm** for the latest country list.

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1 Document Description

About this Manual

This user guide is written for professional system integrators, Information Technology professionals, service personnel and technicians. It provides information for the installation and use of the Acer AB7000 server system. Installation and maintenance should be performed by experienced professionals only.

Manual Organization

Front Matter

You should be totally familiar with this section which provides a general overview of safety precautions that must be followed whenever installing or servicing the server.

Chapter 1: Document Description

Refer here for an overview of this user guide.

Chapter 2: Chassis Enclosure - AB7000

This chapter provides information regarding the rack and system enclosure installation which includes: descriptions of the chassis management module, software, system configuration guidance, power supply modules and how to configure the system for double-wide modules.

Chapter 3: Sever Blades: Setup and Installation

This section provides information on the setup, installation, maintenance and upgrade of the AB460 F1 and AB2x280 F1 server blades.

Chapter 4: Networking Switch Modules

Detailed here is information on the installation and configuration of the 1/10Gb Ethernet Switch Module and 4X QDR Infiniband Switch Modules.

Chapter 5: Acer Smart Blade Manager

This chapter details how to configure and use the Smart Blade Manger.

Appendix A

Provides information on troubleshooting, detailing BIOS post code error messages.

2 Chassis Enclosure

Introduction

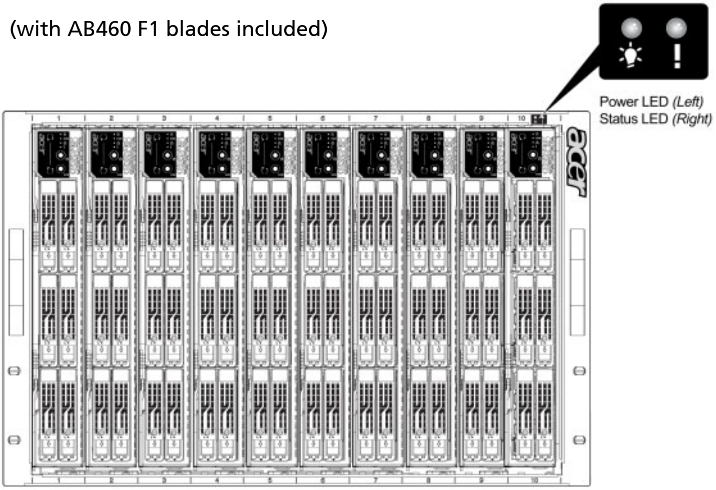
The Acer AB7000 optimizes component efficiency by sharing the same power supply, management module, and switch module in a pre-configured form factor. The highly-integrated system design of the AB7000 provides you with a:

- Datacenter minimizing computing density through an existing rack infrastructure
- High performance computing environment from a flexible multi-node computing architecture
- Highly configurable environment for different application requirements

External and internal structure

Front panel

Figure 2-1. Front Panel



(with AB460 F1 blades included)

Power LED (Left)
Status LED (Right)
1
2
3
4
5
6
7
8
9
10

Front panel LED indicators

Enclosure power supply LED descriptions are shown in the following table .

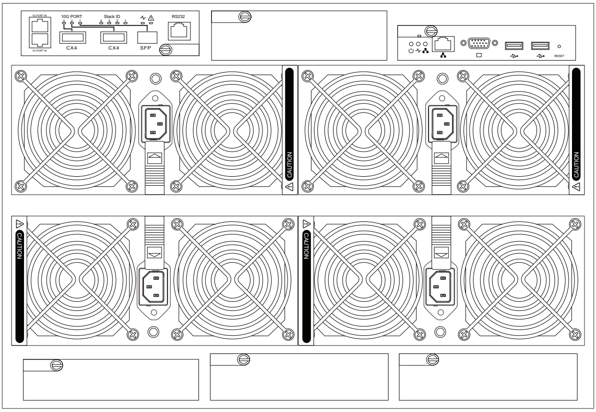
LED	State	Indication
Power Status LED (left LED)	Yellow (off)	No CMM or Not Ready
	Green	Power On or Standby Power
	Green (Flashing)	Power Overload
	Red	Power Supply Failure

Fault LED (right LED)	Yellow	Over Temperature State in Switch Module (GbE, IB) or Power Supply Module
	Yellow (Flashing)	Fan Failure
	Off	Normal

Rear Panel

Figure 2-2. Rear Panel

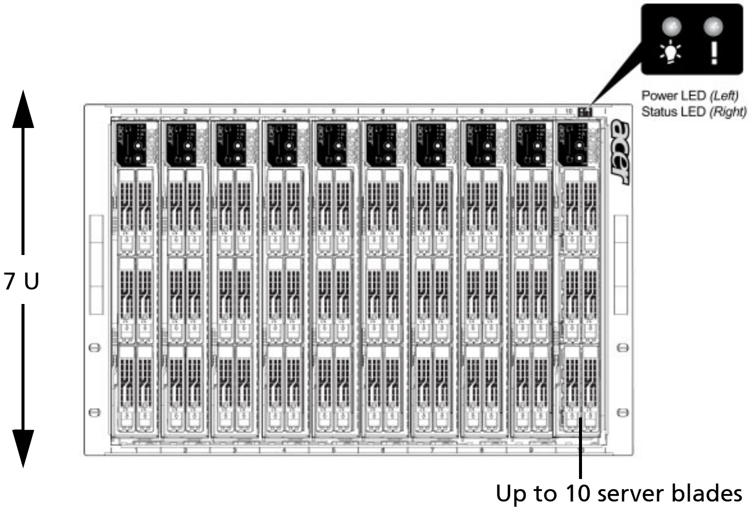
(with 1Gb/10Gb Ethernet module and CMM included)


1G PORT IN
10G PORT
3 2 1
Stack ID
4 3 2 1
RS232
1G PORT IN
CX4
CX4
SFP
RESET
CAUTION
CAUTION
CAUTION
CAUTION

Product Configuration Guidance

Blade Configuration

Figure 2-3. Blade Configuration


Power LED (Left)
Status LED (Right)
7 U
Up to 10 server blades

The AB7000 can be configured with up to ten (10) blades. There are two blade options available:

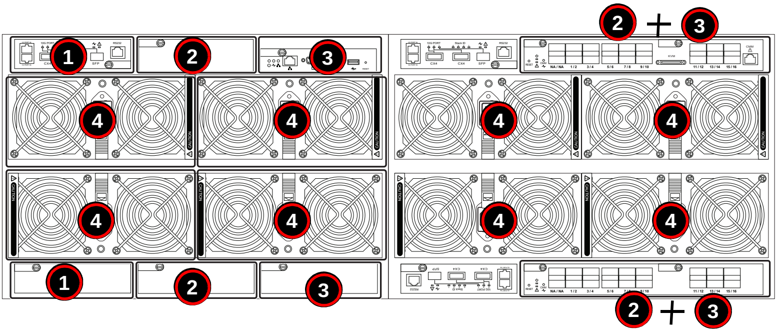
- AB460 F1
- AB2x280 F1

The blades may be configured in any required arrangement within the enclosure chassis.

Warning! To maintain proper airflow all blade bays must have blades or dummies inserted during operation.

Rear Modules

Figure 2-4. Rear Modules



Bay No.	Module
1 (top)	1G/10Gb Ethernet Switch Module
1 (bottom)	1G/10Gb Ethernet Switch Module (installed for Ethernet module redundancy)
2 (top)	Dummy
3 (top)[1]	Chassis Management Module (CMM)
2+3 (top)[1]	4xQDR(40Gbps) Infiniband Switch module with miniCMM integrated (installed for Inifiniband module redundancy)
2+3 (bottom)	4xQDR(40Gbps) Infiniband Switch module
4	Power supply with cooling fan module integrated (3+1 redundant)

Note: 1 A CMM or miniCMM is required for each blade system.

Setup and Installation

Overview

This chapter provides a quick setup procedure for your AB7000. Following these steps in the order given should enable you to have the system operational within a minimum amount of time. This quick setup assumes that the processor(s) and memory have already been installed. If not, please turn to “3 Server Blades: Setup and Installation” on page 91 for details on installing specific components.

Unpacking the System

You should inspect the box the AB7000 was shipped in and note if it was damaged in any way. If the server itself shows damage you should file a damage claim with the carrier who delivered it.

Decide on a suitable location for the rack unit that will hold the AB7000. It should be situated in a clean, dust-free area that is well ventilated. Avoid areas where heat, electrical noise and electromagnetic fields are generated. You will also need it placed near a grounded power outlet. Read the "Rack Precautions" and "Server Precautions" in the next section.

The box the AB7000 was shipped in should include two sets of rail assemblies, two handles and the mounting screws you will need to install the system into the rack. Follow the steps in the order given to complete the installation process in a minimum amount of time. **Please read this section in its entirety before you begin the installation procedure outlined in the sections that follow.**

Choosing a Setup Location

The following are important considerations for choosing a setup location:

- Leave enough clearance in front of the rack to enable you to remove the blade units (~25 inches).
- Leave approximately 30 inches of clearance in the behind or to the rear of the rack to allow for sufficient airflow and ease in servicing.

- This product is intended for installation only in a *Restricted Access Location* (dedicated equipment rooms, service closets and the like). This is because the AB7000 enclosure does not provide any physical security measures.
- This product is not suitable for use with visual display work place devices according to *§2* of the *German Ordinance for Work with Visual Display Units*.

Warning! Please read the following important Warnings and Precautions!

Rack Precautions

The following are important precautions concerning rack setup:

- The enclosure unit is heavy and requires at least two people to lift it.
- Ensure that the leveling jacks on the bottom of the rack are fully extended to the floor with the full weight of the rack resting on them.
- In single rack installation, stabilizers should be attached to the rack.
- In multiple rack installations the racks frames should be grounded to the same earth ground as the electrical source for the power supplies by means of a grounding strap.

Server Precautions

The following are important precautions concerning server setup:

- Review the electrical and general safety precautions in this front matter.
- Determine the placement of each component in the rack *before* you install the rails.
- Install the heaviest server components on the bottom of the rack first, and then work up.
- Use a regulating uninterrupted power supply (UPS) to protect the server from power surges, voltage spikes and to keep your system operating in case of a power failure.

- Allow the hot plug hard drives and power supply units to cool before touching them.
- Always keep the rack's front door and all panels and components on the servers closed when not servicing to maintain proper cooling.

Rack Mounting Considerations

Below are listed important considerations for rack mounting.

Ambient Operating Temperature

If installed in a closed or multi-unit rack assembly, the ambient operating temperature of the rack environment may be greater than the ambient temperature of the room. Therefore, consideration should be given to installing the equipment in an environment compatible with the manufacturer’s maximum rated ambient temperature. Refer to Appendix E for operating temperature specifications.

Reduced Airflow

Equipment should be mounted into a rack so that the amount of airflow required for safe operation is not compromised.

Mechanical Loading

Equipment should be mounted into a rack so that a hazardous condition does not arise due to uneven mechanical loading.

Circuit Overloading

Consideration should be given to the connection of the equipment to the power supply circuitry and the effect that any possible overloading of circuits might have on over-current protection and power supply wiring. Appropriate consideration of equipment nameplate ratings should be used when addressing this concern.

Reliable Ground

A reliable ground must be maintained at all times. To ensure this, the rack itself should be grounded. Particular attention should be given to power supply connections other than the direct connections to the branch circuit (such as the use of power strips and so on).

Note: It is recommended that you seek the advice and assistance of a licensed electrician that can advise you on best practices for ensuring that the electrical supply and the rack are joined to a *Common Bonding Network*.

Professional documents on grounding techniques include:

- ANSI/TIA-942 – Telecommunications Infrastructure Standard for Data Centers
- J-STD-607-A-2002 – Commercial Building Grounding (Earthing) and Bonding Requirements for Telecommunications
- IEEE Std 1100™-2005 (IEEE Emerald Book) – IEEE Recommended Practice for Powering and Grounding Electronic Equipment

Installing the System Into a Rack

This section provides information on installing the AB7000 into a rack. There are a variety of rack units on the market, meaning the procedure may differ slightly. Refer to the Enclosure Template that was included with the system for help.

Rack Mounting Hardware

The following is a list of rack mounting hardware you will need for rack setup and installation:

- Two rail assemblies (one for each side of the enclosure)
- Two handles
- Four roundhead screws for fastening the enclosure ears to the rack
- Eight flathead screws and washers for mounting the rails to the rack

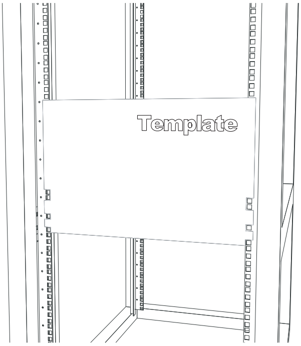
Installation

Use the procedure below for installing an enclosure in a rack.

Installing an enclosure:

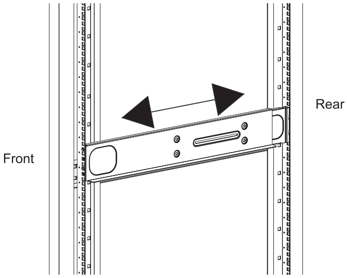
1. Decide where you want to place the blade enclosure into the rack (see "Rack Mounting Considerations" in the previous section).
2. Position the Enclosure Template at the front of the enclosure to determine the locations of the screws for the enclosure rails (see Figure 2-5).

Figure 2-5. Positioning the Enclosure Template



3. The two enclosure rail sections are screwed together to keep them immobile during shipping. Release these screws just enough to allow the rails to slide apart. Note the arrow on the rail, which indicates the end that attaches to the front of the rack.
4. Slide the rails apart far enough to match the depth of the rack. Position the rails with the template and secure the front of each to the front of the rack with two flathead screws, then secure the back of each rail to the rear of the rack with two flathead screws (see Figure 2-6). Note that the rails are left/right specific and very heavy.

Figure 2-6. Securing the Rails to the Rack



5. (Optional step) Add the front left and right handles to the enclosure using five screws to secure each handle. Install a thumbscrew through the bottom hole of each handle (see Figure 2-7).

Note: These handles are optional and need only be installed when mounting the system into a short rack. When mounting into a deep rack, they are unnecessary and regular screws should be used instead of thumbscrews.

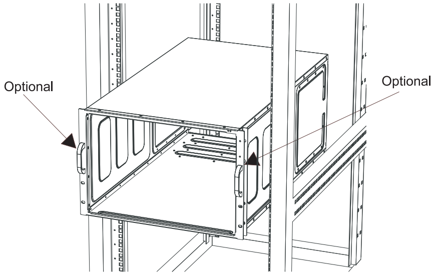
Be aware that these handles are not to be used for lifting the system, they are only to be used to slide the system within the rack.

6. With one person on either side (see the descriptive label on the side of the enclosure), lift the enclosure and slide it into the installed rails.

Warning! Be sure that the enclosure is empty of all blades, power supplies, switches and management modules **BEFORE** lifting. These should be installed **AFTER** the enclosure is mounted in the rack. Injury and damage may occur if components are not removed from the rack prior to installation.

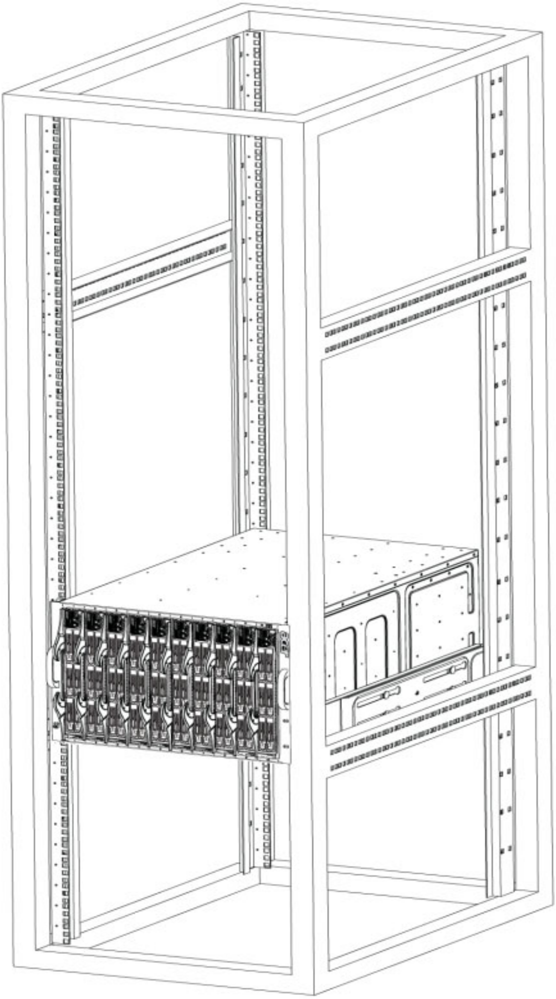
7. After pushing the enclosure all the way into the rack, use two roundhead screws on each side of the server to lock it into place.

Figure 2-7. Attaching the Optional Handles



8. The enclosure is now securely installed in the rack (see Figure 2-8).

Figure 2-8. Enclosure Installed into Rack

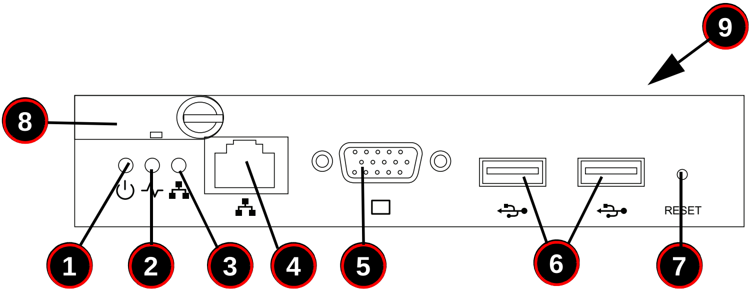


Chassis Management Module

The Chassis Management Module (CMM) (Figure 2-9) is a required module in a blade system. This “command” module communicates with the blade units, the power supplies and the blade switches. Used in conjunction with the Web Interface or Acer Smart Blade Manager, the CMM provides administrator control over individual blade units, power supplies, cooling fans and networking switches and monitors onboard temperatures, power status, voltage levels and fan speeds. There are several models of CMM modules that may be used with your system. These include:

The CMM provides a dedicated, local and remote KVM (keyboard/ video/mouse) connection over an out of band TCP/IP Ethernet network during any server state (functioning, blue-screen, powered down, BIOS and so on). It also supports Virtual Media (VM) redirection for CD, floppy and USB mass storage devices and configures such information as the switch IP addresses.

Figure 2-9. Chassis Management Module



Item#	Description
1	Power ED L
2	Activity LED
3	Fault LED
4	Ethernet Port
5	VGA (Monitor) Port

Item#	Description
6	USB orts P
7	Reset Button
8	Module Release Handle
9	USB 2.0/1.1 Switch (accessed at back of module, see Figure 2-9)

Feature	Description
Management Capabilities	Can manage 10 blade units with up to 20 computing nodes, network modules and 4 power supplies
Ports	One Ethernet port, one VGA port and two USB ports
Basic Functions Supported	Local KVM, remote KVM, remote storage, Serial-over-LAN (SOL), blade monitoring and control
System Management	System management interface provided via dedicated LAN
Power Consumption	Approximately 20W
Operating System	Firmware (upgradable)

Reset Button

The Reset button located on the front of the CMM module is used to reset the following software settings to their defaults:

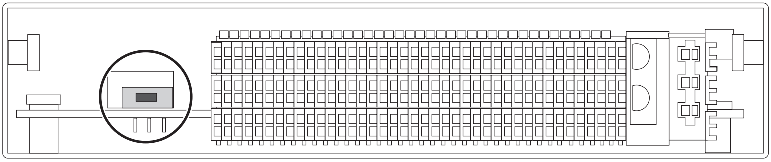
Software Setting	Default
User Name and Password	Reset to **root** and **superuser** (case sensitive)
IP Address	Reset to 192.168.100.100
Acer Address	Reset to 0.0.0.0

Software Setting	Default
Subnet Mask	Reset to 255.255.255.0

To reset these values, press and hold the Reset button for five seconds.

USB Switch

Figure 2-10. USB Switch on Rear of CMM



The USB ports on the CMM can function in either 2.0 or 1.1 mode (the default is 1.1). A switch located on the PCB at the back of the CMM module is used to change the USB mode (see Figure 2-10).

To access the switch, you need to remove the CMM from the enclosure. Pull the CMM out and locate the switch near the large gray connector. The settings are silk screened on the PCB. After setting the switch, insert the CMM module back into its bay.

Module Installation

Make sure the cover to the module has been installed before proceeding.

Installing the Module:

1. Remove the dummy cover from the bay you want to place the module in.
2. Place the module's release handle in the open position.
3. Slide the module into the module bay until it stops.
4. Push the release handle to the closed position.
5. After the module has been installed and the handle locked, it will turn on and a POST test will run to verify it is working properly.

Removing the Module:

1. Pull out the release handle to the open position.
2. Pull the module out of the bay.
3. Replace immediately with another module or with a dummy module cover to maintain airflow integrity.

Configuring the CMM

To access/configure the CMM, you first have to configure the IP settings of the CMM depending on you network environment. The below procedure for this configuration just serves as a reference for getting the CMM setup. If your system has Linux OS, please follow similar instructions to get the CMM setup.

Requirements are:

- Computer system with LAN (RJ45) port
- RJ -45 Ethernet cable

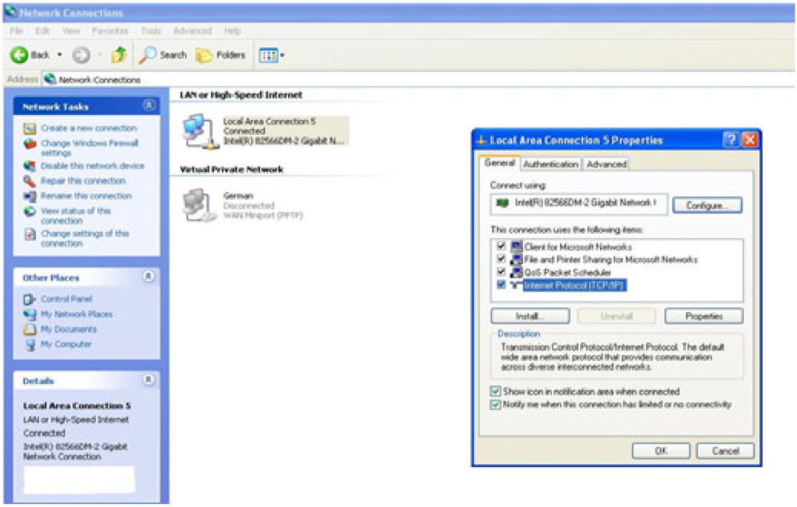
The default IP of the CMM is **192.168.100.100**. Configure the Computer system (connected through Ethernet-LAN to the CMM) to the same address range (for example 192.168.100.101).

Configuring the CMM in Windows OS:

1. Go to START → CONTROL PANEL → NETWORK CONNECTIONS
2. Right-click on **LAN** to view properties.

3. Choose “Internet Protocol (TCP/IP)” under the GENERAL tab and click on PROPERTIES (see Figure 2-11).

Figure 2-11. Choose Internal Protocol



Network Connections
File Edit View Favorites Tools Advanced Help
Back Search Folders
Address Network Connections
Network Tasks
Create a new connection
Change Windows Firewall settings
Disable this network device
Repair this connection
Rename this connection
View status of this connection
Change settings of this connection
Other Places
Control Panel
My Network Places
My Documents
My Computer
Details
LAN or High-Speed Internet
Virtual Private Network
Local Area Connection 5 Properties
General Authentication Advanced
Configure...
Install... Uninstall Properties
OK Cancel

Local Area Connection 5
LAN or High-Speed Internet
Connected
Intel(R) 82566DM-2 Gigabit Network Connection

German
Disconnected
WAN Miniport (PPTP)

Connect using: Intel(R) 82566DM-2 Gigabit Network I

This connection uses the following items:
- ☑ Client for Microsoft Networks
- ☑ File and Printer Sharing for Microsoft Networks
- ☑ QoS Packet Scheduler
- ☑ Internet Protocol (TCP/IP)

Description: Transmission Control Protocol/Internet Protocol. The default wide area network protocol that provides communication across diverse interconnected networks.

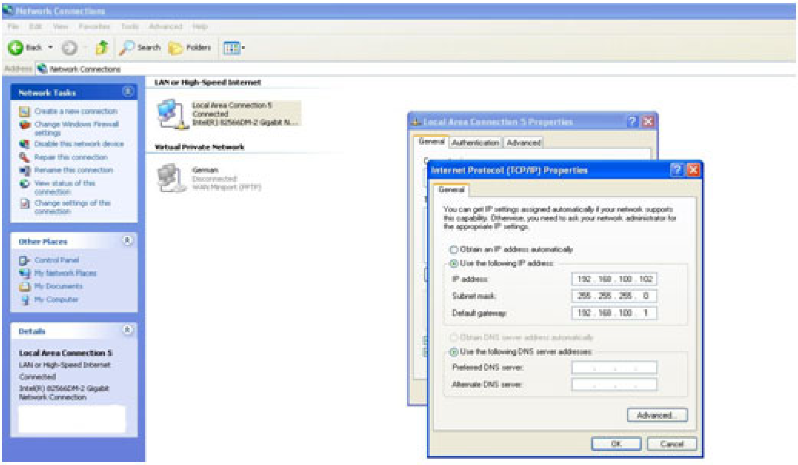
☑ Show icon in notification area when connected
☑ Notify me when this connection has limited or no connectivity

4. Manually configure the IP address of the computer system to be in the same address range as the CMM (see Figure 2-12).

   Example:

   - IP address: 192.168.100.101
   - Subnet Mask: 255.255.255.0
   - Default Acer: 192.168.100.1

Figure 2-12. Manually Configure the IP Address


Network Connections
File Edit View Favorites Tools Advanced Help
Back
Search
Folders
Address
Network Connections
Network Tasks
Create a new connection
Change Windows Firewall settings
Disable this network device
Repair this connection
Rename this connection
View status of this connection
Change settings of this connection
Other Places
Control Panel
My Network Places
My Documents
My Computer
Details
Local Area Connection 5
LAN or High-Speed Internet
Connected
Intel(R) 82566DM-2 Gigabit Network Connection
LAN or High-Speed Internet
Local Area Connection 5
Connected
Intel(R) 82566DM-2 Gigabit N...
Virtual Private Network
German
Disconnected
WAN Miniport (PPTP)
Local Area Connection 5 Properties
General
Authentication
Advanced
Internet Protocol (TCP/IP) Properties
General
Advanced...
OK
Cancel

You can get IP settings assigned automatically if your network supports this capability. Otherwise, you need to ask your network administrator for the appropriate IP settings.

○ Obtain an IP address automatically
● Use the following IP address:

IP address: 192 . 168 . 100 . 102
Subnet mask: 255 . 255 . 255 . 0
Default gateway: 192 . 168 . 100 . 1

○ Obtain DNS server address automatically
● Use the following DNS server addresses:

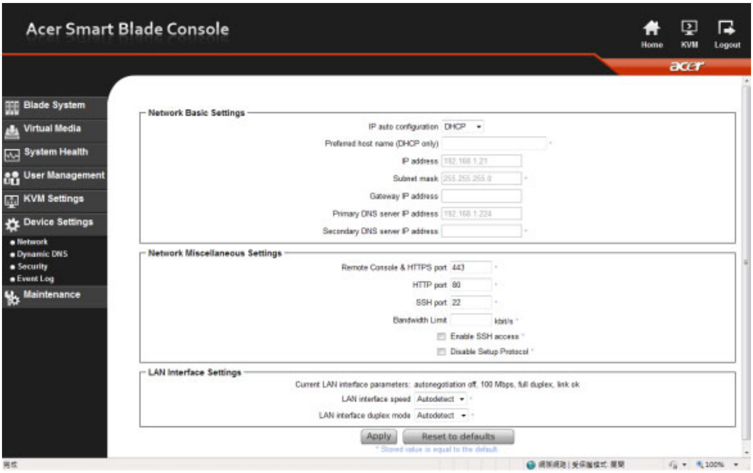
Preferred DNS server: . . .
Alternate DNS server: . . .

5. Once the IP address for the computer system is configured, the CMM can be accessed through the web browser by entering the default IP address **192.168.100.100** of the CMM into the browser's address bar.

6. Now, the IP address, subnet mask and default gateway of the CMM can be changed according to the network environment (see

Figure 2-13). Please refer to the Acer Smart Blade Console section on page 28.

Figure 2-13. Changing Settings


Acer Smart Blade Console
Home
KVM
Logout
acer
Blade System
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Network
Dynamic DNS
Security
Event Log
Maintenance
Apply
Reset to defaults

Network Basic Settings

IP auto configuration: DHCP
Preferred host name (DHCP only): *
IP address: 192.168.1.21
Subnet mask: 255.255.255.0 *
Gateway IP address:
Primary DNS server IP address: 192.168.1.224
Secondary DNS server IP address: *

Network Miscellaneous Settings

Remote Console & HTTPS port: 443 *
HTTP port: 80 *
SSH port: 22 *
Bandwidth Limit: kbit/s *
☐ Enable SSH access *
☐ Disable Setup Protocol *

LAN Interface Settings

Current LAN interface parameters: autonegotiation off, 100 Mbps, full duplex, link ok
LAN interface speed: Autodetect *
LAN interface duplex mode: Autodetect *

* Stored value is equal to the default.

Warning! Do not change any other setting, unless you are familiar with it.

CMM Functions

The following sections describe local functions and remote functions of the CMM. With only minor exceptions, all of the remote functions can be performed by one of three mechanisms: web-based access to the CMM module, access to the CMM using Acer Smart Blade Manager, a client tool implemented in Java.

When the web based browser is used, the CMM acts as a web server, requiring a higher bandwidth connection to the CMM. If there are any bandwidth constraints,Acer Smart Blade Manager will provide a superior experience. Additionally, since graphical updates are provided by client-side Java, Acer Smart Blade Manager can also be a superior user experience.

Local KVM

KVM stands for Keyboard/Video/Mouse. With KVM, a user can control multiple blades with a single keyboard/video/mouse setup. The maximum video resolution the KVM can support is 1280 x 1024 @ 60 Hz.

To Use: Connect your keyboard, mouse and monitor to the USB and VGA connectors on the CMM module, then push the KVM button on the control panel of the blade module you wish to access. The KVM LED on the blade will then illuminate and you can interface directly with that blade. To access a different blade module, simply push the KVM button on that blade's control panel.

Remote KVM over IP

Remote KVM over IP is independent from local KVM (although local KVM can operate in parallel with Remote KVM). Remote KVM encrypts all communication between the remote user and the CMM.

To Use: Remote KVM over IP is initiated with the management software (Acer Smart Blade Manager or Acer Smart Blade Console). Attach the LAN cable to the LAN port on the CMM module then refer to Acer Smart Blade Console on page 28 to login and use either utility.

Virtual Media

The Virtual Media function allows the user to connect to a remote storage device (such as a floppy, hard disk, CD-ROM or USB storage device) and access the device as if it were local. This can be used not only to read and write to remote storage devices but to load an operating system from a remote drive.

Serial Over LAN (SOL)

Serial Over LAN allows you to redirect the input and output of a serial port via IPMI in order to manage blade modules from a remote location.

To Use: Serial Over LAN can be activated via the Acer Smart Blade Console. See the Acer Smart Blade Console on page 28.

Monitoring Functions

Used in conjunction with Acer Smart Blade Manager or Acer Smart Blade Console, the CMM module can monitor and provide information on the hardware health of the blade modules and the system as a whole. In addition to the monitoring functions, you can remotely power on, power off or reboot a system.

Health information includes:

- Temperature levels
- Fan speeds
- Voltage levels
- Power status

Power Consumption Management

The CMM module's firmware can also control all power on/off activity in the whole blade system. This is done by using the Power button, onboard BMC or from any other use of remote management software.

Once a blade module is installed in the enclosure the installed CMM immediately receives information on the rated Max Power Consumption value of the new blade module. The CMM then calculates whether there is enough power for this new blade module by comparing the Max Power Consumption value of the new blade module with the calculated Remaining Power value of the system.

If there is enough power, the CMM will power on the blade. However if there is not enough power in the blade system, then the new blade module is not powered on and the front panel LED on the enclosure will blink.

After the blade is powered on, the CMM then collects the actual power consumption of this individual blade and updates the calculated Remaining Power value for the system.

The CMM also reserves power for all the networking and chassis management modules installed on the system.

Note: Blade modules with onboard BMC in them provide individual IPMI for each blade unit. It communicates with Acer Smart Blade Manager or Acer Smart Blade Console.

Warning! One CMM module must be running to control the power systems and prevent overloading.

Firmware

The firmware for the CMM switch resides in the module. This firmware can be updated with the Acer Smart Blade Console.

Within the utility, go to the MAINTENANCE > UPDATE FIRMWARE screen in the Acer Smart Blade Console. Here you can enter the name of the firmware you want to update or click on BROWSE to select the firmware file. Finish by clicking the UPLOAD button.

Note: This process is not reversible once the firmware is updated, so proceed with caution. It might take a few minutes to complete this procedure. See the the user’s manual for your purchased blade module on your system’s CD-ROM for further details.

Acer Smart Blade Console

Introduction

The Acer Smart Blade Console is a web-based interface that consolidates and simplifies system management for Acer AB7000 systems. The Acer Smart Blade Console aggregates and displays data from the CMM.

The Acer Smart Blade Console provides the following key management features:

- Enables IT administrators to view in-depth hardware configuration and status information using a single intuitive interface.
- Provides an OS-independent, remote graphical console.
- Allows remote users to map local media (floppy, CD-ROM, removable disks and hard drives) or ISO images on a shared network drive to a blade server.

Supported Browsers

The following browsers have been tested for use with the Acer Smart Blade Console. It is recommended that you use the most current revision of the browser you choose. The minimum browser revisions supported by the Acer Smart Blade Console are shown below:

- Internet Explorer 7
- Firefox 2.0.0.7
- Netscape 9.03b

Network Connection/Login

To log into the Acer Smart Blade Console:

1 Launch a web browser.

2 In the address field of the browser, enter the IP address that you assigned to the Chassis Management Module and hit the <ENTER> key.

3 When the browser makes contact with Acer’s Chassis Management Module, enter your *username* and *password*, then click LOGIN.

4 The Acer Smart Blade Console will then display. See Figure 2-14.

Address Defaults

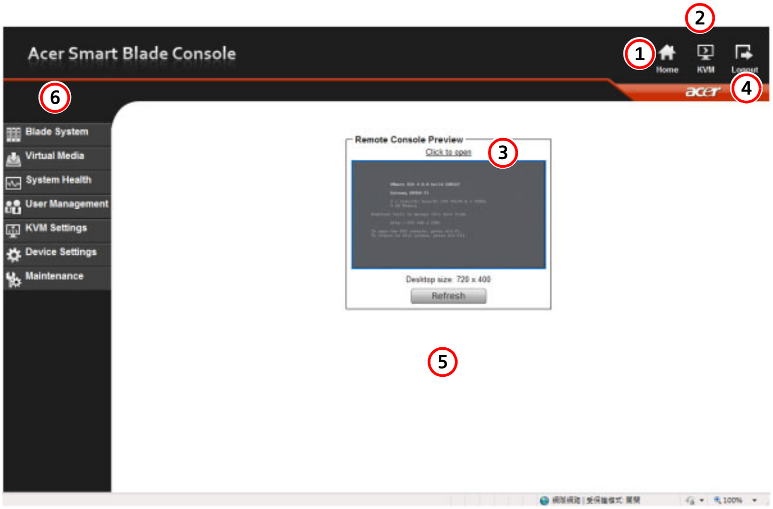
The following table shows the default addresses that are initially set for the CMM. Afterwards, you can change these values within the program (see “Device Settings” on page 57).

Default	Description
Default IP Address	192.168.100.100
Default Acer Address	0.0.0.0
Default Subnet Mask	255.255.255.0
Default username	root
Default password	superuser

Home Page

Figure 2-14 and the following table respectively display the Acer Smart Blade Console and its controls.

Figure 2-14. Home Page


Acer Smart Blade Console
1
2
Home
KVM
Logout
acer
4
6
Blade System
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Maintenance
Remote Console Preview
Click to open
3
Refresh
5

Desktop size: 720 x 400

Item	Name	Description
1	Home	Click this icon to return to the Home Page.
2	KVM	Click on this icon to initiate Remote KVM over IP and remotely operate a selected blade module.
3	Remote Console Screen	The active screen from the remote console is displayed here. Clicking on this window also accesses the remote console. See “Remote Console” on page 71 for details.
4	Logout	Click on this icon to log out. See “Log Out” on page 31 for details.
5	Refresh	Click on this icon to refresh theremote console preview screen.
6	Main Menu Icons	Use these icons to initiate the various functions in the Acer Smart Blade Console. See Main Menu Icons for details.

Main Menu Icons

The icons below in the following table cover the main functions of IPMI. Clicking on an icon will reveal a submenu of related functions.

Icon	Description
Blade System	Click this icon for remote access and management of individual blade modules. See “Blade System” on page 32 for details.
Virtual Media	Click on this icon to use virtual remote media (storage) devices. See“Virtual Media” on page 40 for details.
System Health	Click on this icon to view the system event log and manage the health of remote systems. See“System Health” on page 45 for details.
User Management	Click on this icon for User Management configuration. See“User Management” on page 47 for details.

Icon	Description
KVM Settings	Click on this icon to configure keyboard, video and mouse settings. See“KVM Settings” on page 52 for details.
Device Settings	Click on this icon to configure device settings. See“Device Settings” on page 57 for details.
Maintenance	Click on this icon to get information on the CMM, update its firmware, check the event log and reset the unit. See“Maintenance” on page 67 for details.

Log Out

From any page, click on the LOG OUT icon at the top right of the screen to log out of the Acer Smart Blade Console.

Blade System

The BLADE SYSTEM menu allows you to access and configure the various blades in your AB7000 system. Clicking the BLADE SYSTEM icon allows you to access the following screens through its sub-menus:

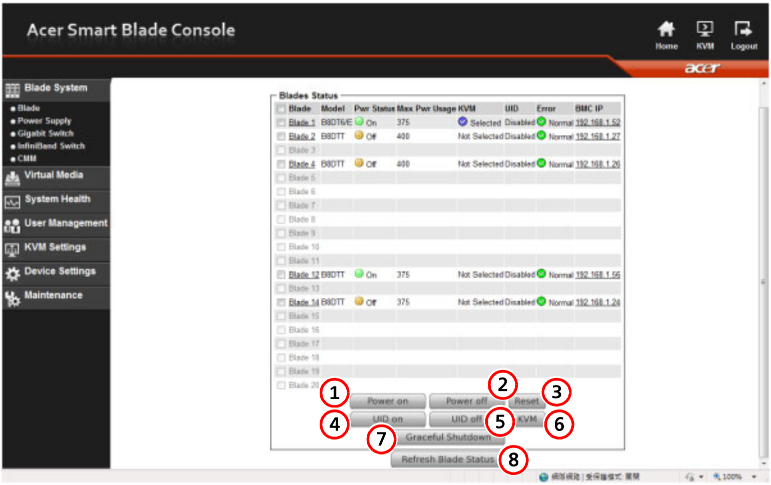
- Blade
- Power Supply
- Gigabit Switch
- InfiniBand Switch
- CMM

Blade

The first BLADE option in the BLADE SYSTEM submenu allows you to check the status of all the blade modules in the system including power status, KVM status, UID status, error status and management. The command icons below the blade status list allows you to perform various functions, as shown in Figure 2-15 and described in the following table.

To perform a function, first click the box(es) next to the blade(s) you wish to issue a command to and then click the command button below. You can also click on any of the individual blades listed for a remote console that brings up a screen with details about that particular blade.

Figure 2-15. Blade Status Screen



Acer Smart Blade Console
Home
KVM
Logout
acer
Blade System
Blade
Power Supply
Gigabit Switch
InfiniBand Switch
CMM
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Maintenance
Power on
Power off
Reset
UID on
UID off
KVM
Graceful Shutdown
Refresh Blade Status
1
2
3
4
5
6
7
8

Blades Status

☐	Blade	Model	Pwr Status	Max Pwr Usage	KVM	UID	Error	BMC IP
☐	Blade 1	B8DT6/E	● On	375	✓ Selected	Disabled	✓ Normal	192.168.1.52
☐	Blade 2	B8DTT	● Off	400	Not Selected	Disabled	✓ Normal	192.168.1.27
☐	Blade 3							
☐	Blade 4	B8DTT	● Off	400	Not Selected	Disabled	✓ Normal	192.168.1.26
☐	Blade 5							
☐	Blade 6							
☐	Blade 7							
☐	Blade 8							
☐	Blade 9							
☐	Blade 10							
☐	Blade 11							
☐	Blade 12	B8DTT	● On	375	Not Selected	Disabled	✓ Normal	192.168.1.56
☐	Blade 13							
☐	Blade 14	B8DTT	● Off	375	Not Selected	Disabled	✓ Normal	192.168.1.24
☐	Blade 15							
☐	Blade 16							
☐	Blade 17							
☐	Blade 18							
☐	Blade 19							
☐	Blade 20							

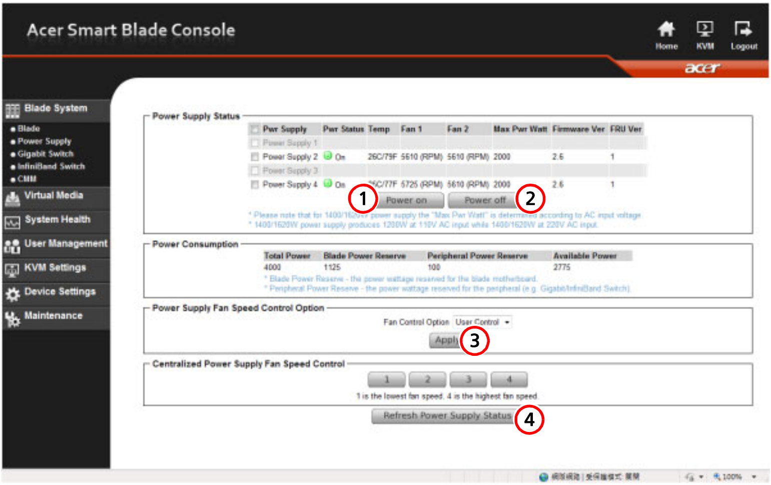
Item	Name	Description
1	Power On	Click to apply power to (power up) a selected blade module.
2	Power Off	Click to remove power from a selected blade module.
3	Reset	Click this icon to reset a selected blade module.
4	UID On	Click this icon to turn on the UID LED of a selected blade module.
5	UID Off	Click this icon to turn off the UID LED of a selected blade module.
6	KVM	Click on this icon to initiate Remote KVM over IP and remotely operate a selected blade module.
7	Graceful Shutdown	Click to send a selected blade module into an S5 sleep state.
8	Refresh Blade Status	Click to refresh the screen and update the status of the blade modules shown.

Power Supply

Click on POWER SUPPLY to reveal the POWER SUPPLY STATUS screen (Figure 2-16). The POWER SUPPLY option in the BLADE SYSTEM submenu allows you to check the status of all the power supplies in the system you are accessing. Power status (on or off), temperature, fan rpm, wattage, firmware version and FRU version are all shown in the power supply status list. In addition, the commands listed in the following table may be issued to the power supplies.

To perform a function, first click the box(es) next to the power supplies you wish to issue a command to and then click the command icon.

Figure 2-16. Power Supply Status Screen


Acer Smart Blade Console
Home
KVM
Logout
acer
Blade System
Blade
Power Supply
Gigabit Switch
InfiniBand Switch
CMM
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Maintenance
1
Power on
Power off
2
Apply
3
1
2
3
4
Refresh Power Supply Status
4
網際網路 | 受保護模式: 關閉
100%

Power Supply Status

☐	Pwr Supply	Pwr Status	Temp	Fan 1	Fan 2	Max Pwr Watt	Firmware Ver	FRU Ver
☐	Power Supply 1							
☐	Power Supply 2	● On	26C/79F	5610 (RPM)	5610 (RPM)	2000	2.6	1
☐	Power Supply 3							
☐	Power Supply 4	● On	5C/77F	5725 (RPM)	5610 (RPM)	2000	2.6	1

* Please note that for 1400/1620W power supply the "Max Pwr Watt" is determined according to AC input voltage.
* 1400/1620W power supply produces 1200W at 110V AC input while 1400/1620W at 220V AC input.

Power Consumption

Total Power	Blade Power Reserve	Peripheral Power Reserve	Available Power
4000	1125	100	2775

* Blade Power Reserve - the power wattage reserved for the blade motherboard.
* Peripheral Power Reserve - the power wattage reserved for the peripheral (e.g. Gigabit/InfiniBand Switch).

Power Supply Fan Speed Control Option

Fan Control Option: User Control

Centralized Power Supply Fan Speed Control

1 is the lowest fan speed. 4 is the highest fan speed.

Item	Name	Description
1	Power On	Click this to power up a selected power supply.
2	Power Off	Click this to shut down a selected power supply.

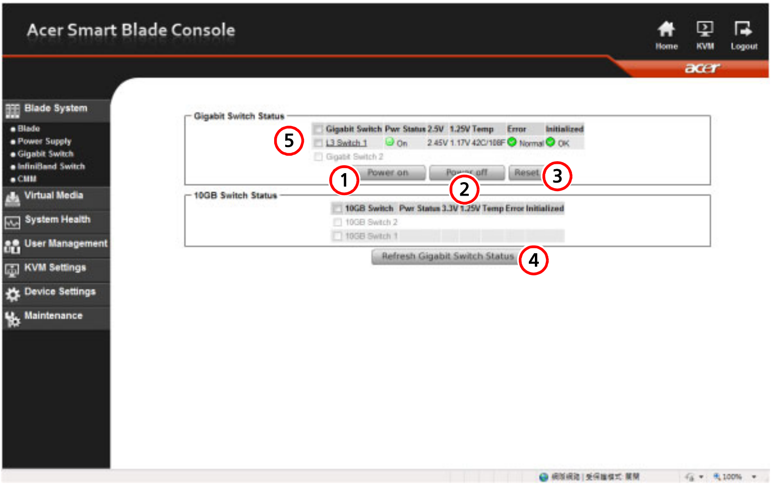
Item	Name	Description
3	Power Supply Fan Speed Control	If you change the FAN CONTROL option from AUTO CONTROL to MANUAL, you may alter the speed of the power supply fans by clicking one of the fan icons. Set to minimum speed by clicking the icon numbered "1" and to maximum speed by clicking the icon numbered "4". The icons numbered "2" and "3" are for incremental increases between the minimum and maximum settings. After changing the fan speed, you should see the fan rpm change in the status screen. Settings affect all fans simultaneously, you cannot control the speed of individual fans.
4	Refresh Power Supply Status	Click to refresh the screen and update the status of the power supplies shown.

Gigabit Switch

Click on GIGABIT SWITCH to reveal the GIGABIT SWITCH STATUS screen (Figure 2-17). The GIGABIT SWITCH option in the BLADE SYSTEM submenu allows you to check the status of all the GbE modules in the system you are accessing. Power status (on or off), voltage levels, temperature, error status and initialization status are all shown in the main screen (see the following table). In addition, the commands listed below may be issued to the GbE module.

To perform a function, first click the box(es) next to the GbE module(s) you wish to issue a command to and then click the command icon.

Figure 2-17. Gibabit Switch Status Screen


Acer Smart Blade Console
Home
KVM
Logout
acer
Blade System
Blade
Power Supply
Gigabit Switch
InfiniBand Switch
CMM
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Maintenance
Gigabit Switch Status
10GB Switch Status
Power on
Power off
Reset
Refresh Gigabit Switch Status
1
2
3
4
5

☐	Gigabit Switch	Pwr Status	2.5V	1.25V	Temp	Error	Initialized
☐	L3 Switch 1	● On	2.45V	1.17V	42C/108F	● Normal	● OK
☐	Gigabit Switch 2						

☐	10GB Switch	Pwr Status	3.3V	1.25V	Temp	Error	Initialized
☐	10GB Switch 2						
☐	10GB Switch 1						

Item	Name	Description
1	Power On	Click this to power up a selected GbE module.
2	Power Off	Click this to shut down a selected GbE module.
3	Reset	Click this icon to reset a GbE module to its default settings.
4	Refresh Gigabit Switch Status	Click this to refresh the screen and update the status of the Gigabit Switch shown.
5	Gigabit Switch Links	Click on a switch listed here to open another window that allows you to manage and configure that GbE switch.

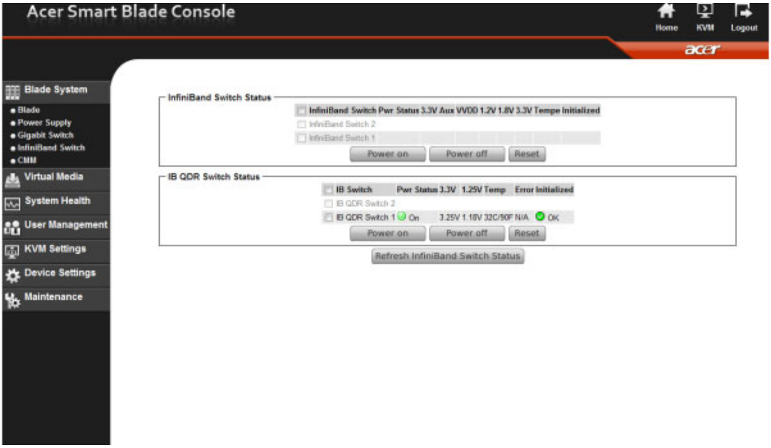
Note: Initially, you must manually enter the IP address for each GbE switch to gain access to it. Each IP address should be unique when there are multiple GbE switches on the same network segment.

After gaining access to the GbE switch(es), you can use the reset button to reset their configurations to the default settings. The reset button will reset all GbE switch configurations, including IP address and so on.

InfiniBand Switch

Click on INFINIBAND SWITCH to reveal the INFINIBAND SWITCH STATUS screen (Figure 2-18). The INFINIBAND SWITCH option in the BLADE SYSTEM submenu allows you to check the status of the INFINIBAND SWITCH module in the system you are accessing.

Figure 2-18. InfiniBand Switch Status Screen


Acer Smart Blade Console
Home
KVM
Logout
acer
Blade System
• Blade
• Power Supply
• Gigabit Switch
• InfiniBand Switch
• CMM
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Maintenance
Power on
Power off
Reset
Refresh InfiniBand Switch Status

InfiniBand Switch Status

☐ InfiniBand Switch	Pwr Status	3.3V Aux	VVDD	1.2V	1.8V	3.3V	Tempe	Initialized
☐ InfiniBand Switch 2								
☐ InfiniBand Switch 1								

IB QDR Switch Status

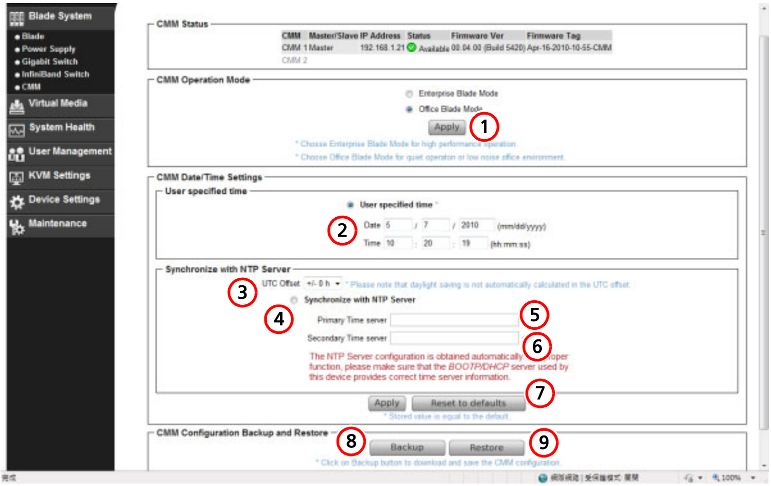
☐ IB Switch	Pwr Status	3.3V	1.25V	Temp	Error	Initialized
☐ IB QDR Switch 2						
☐ IB QDR Switch 1	● On	3.25V	1.18V	32C/90F	N/A	● OK

CMM

Click on CMM to reveal the CMM STATUS screen (Figure 2-19). The CMM option in the BLADE SYSTEM submenu allows you to check the status of all the CMM modules in the system you are accessing. Master/Slave status, operating status, firmware version and firmware tag status are all shown in the main screen.

There are three commands you may give on this screen, as described below in the following table.

Figure 2-19. CMM Status Screen


Blade System
Blade
Power Supply
Gigabit Switch
InfiniBand Switch
CMM
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Maintenance
CMM Status
CMM Operation Mode
Apply
CMM Date/Time Settings
User specified time
Synchronize with NTP Server
Apply
Reset to defaults
CMM Configuration Backup and Restore
Backup
Restore
1
2
3
4
5
6
7
8
9

CMM	Master/Slave	IP Address	Status	Firmware Ver	Firmware Tag
CMM 1	Master	192.168.1.21	✓ Available	00.04.00 (Build 5420)	Apr-16-2010-10-55-CMM
CMM 2					

○ Enterprise Blade Mode

● Office Blade Mode

* Choose Enterprise Blade Mode for high performance operation.

* Choose Office Blade Mode for quiet operaton or low noise office environment.

● User specified time *

Date 5 / 7 / 2010 (mm/dd/yyyy)

Time 10 : 20 : 19 (hh:mm:ss)

UTC Offset +/- 0 h * Please note that daylight saving is not automatically calculated in the UTC offset.

○ Synchronize with NTP Server

Primary Time server

Secondary Time server

The NTP Server configuration is obtained automatically. For proper function, please make sure that the *BOOTP/DHCP* server used by this device provides correct time server information.

* Stored value is equal to the default.

* Click on Backup button to download and save the CMM configuration.

Item	Name	Description
1	CMM Operation Mode	Use this control to specify either Enterprise Blade Mode or Office Blade Mode for your CMM Operation. Choose Enterprise Blade Mode for high performance operation or Office Blade Mode for quiet operation in a low noise office environment. In Enterprise Blade Mode the fan speed and performance is higher. In Office Blade Mode the fan speed is lower, generating less noise.
2	User Specified Time	This option allows the user to enter the time values for the CMM internal real-time clock.
3	Synchronize with NTP Server	Click this to synchronize the CMM's real-time clock with the NTP (Network Time Protocol) server.
4	UTC Offset	This pull-down menu allows you to offset the UTC Timer.

Item	Name	Description
5	Primary Time Server	Enter the IP Address for the primary NTP server that you want to synchronize with the CMM internal real-time clock. NOTE: Daylight savings time cannot be automatically adjusted. Please manually set up the UTC offset twice a year to compensate for daylight savings time.
6	Secondary Time Server	Enter the IP Address for the secondary NTP server that you want to synchronize with the CMM internal real-time clock. NOTE: Daylight savings time cannot be automatically adjusted. Please manually set up the UTC offset twice a year to compensate for daylight savings time.
7	Refresh CMM Status	Click to refresh the screen and update the status of the CMM modules shown.
8	Backup	Click to download and save the CMM configuration.
9	Restore	Click to select and then restore the CMM configuration.

Virtual Media

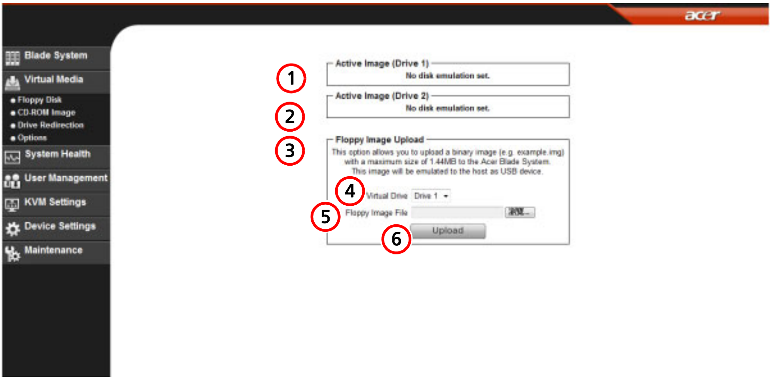
The VIRTUAL MEDIA menu allows you to configure the various media and drive systems in your AB7000 system. Clicking the VIRTUAL MEDIA icon allows you to access the following screens through its sub-menus:

-
- CD-ROM
- Drive Redirection
- Options

Floppy Disk

The FLOPPY DISK option in the VIRTUAL MEDIA submenu allows you to emulate a floppy drive in the host system to upload images to a remote blade module. The FLOPPY DISK STATUS screen (Figure 2-20) that appears and its controls (described in the following table) are shown below.

Figure 2-20. Floppy Disk Status Screen


acer
Blade System
Virtual Media
Floppy Disk
CD-ROM Image
Drive Redirection
Options
System Health
User Management
KVM Settings
Device Settings
Maintenance
1
2
3
4
5
6
Active Image (Drive 1)
Active Image (Drive 2)
Floppy Image Upload
Virtual Drive
Floppy Image File
瀏覽...
Upload

Active Image (Drive 1): No disk emulation set.

Active Image (Drive 2): No disk emulation set.

This option allows you to upload a binary image (e.g. example.img) with a maximum size of 1.44MB to the Acer Blade System. This image will be emulated to the host as USB device.

Virtual Drive: Drive 1

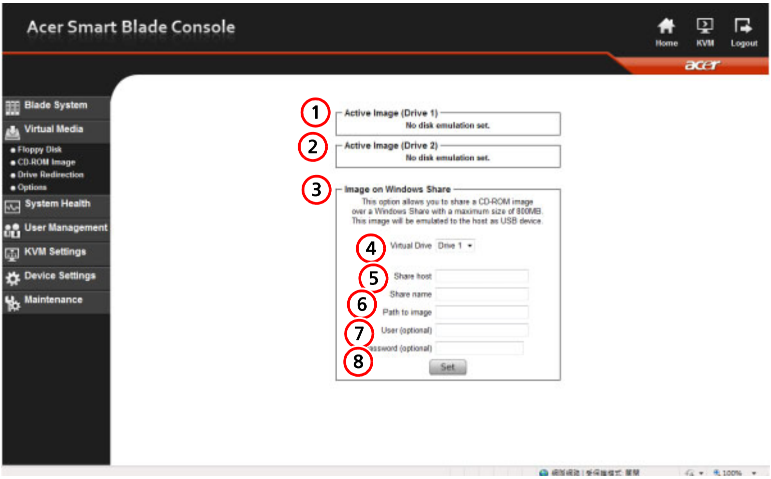
Item	Name	Description
1	Active Image (Drive1)	This box displays if any virtual device/image has been connected to the remote host.
2	Active Image (Drive2)	This box displays if any virtual device/image has been connected to the remote host.

Item	Name	Description
3	Floppy Image Upload	This option allows the user to upload the floppy image located in the remote host as “floppy”. The floppy image uploaded should be in binary format with a maximum size of 1.44 MB. It will be loaded to the Acer CMM card and will be emulated to the host as a USB device.
4	Virtual Drive	Select a drive in the remote host as the destination drive to upload your image data to.
5	Floppy Image File	Click “Browse” to preview and select the files that you wish to upload to the selected host drive.
6	Upload	Once the correct file name appears in the box, click here to upload the floppy image to the drive specified in the remote host.

CD-ROM

The CD-ROM IMAGE option allows you to emulate a CD-ROM drive in the host system to upload images to a remote blade module. The CD-ROM IMAGE screen (Figure 2-21) and its controls (described in the following table) are shown below.

Figure 2-21. CD-ROM Image Screen


Acer Smart Blade Console
Home
KVM
Logout
acer
Blade System
Virtual Media
Floppy Disk
CD-ROM Image
Drive Redirection
Options
System Health
User Management
KVM Settings
Device Settings
Maintenance
1
Active Image (Drive 1)
2
Active Image (Drive 2)
3
Image on Windows Share
4
Virtual Drive
5
Share host
Share name
6
Path to image
7
User (optional)
assword (optional)
8
Set

Active Image (Drive 1): No disk emulation set.

Active Image (Drive 2): No disk emulation set.

This option allows you to share a CD-ROM image over a Windows Share with a maximum size of 800MB. This image will be emulated to the host as USB device.

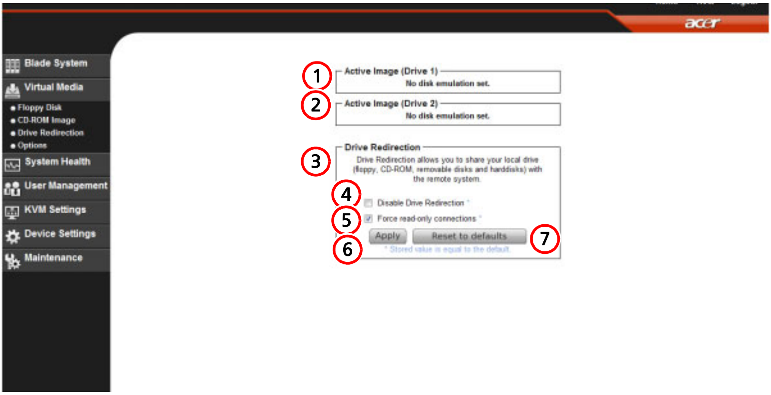
Virtual Drive: Drive 1

Item	Name	Description
1	Active Image (Drive1)	This box displays if any virtual device/image has been connected to the remote host.
2	Active Image (Drive2)	This box displays if any virtual device/image has been connected to the remote host.
3	Image on Windows Share	This allows the user to decide how to share the CD-ROM ISO image file with users in the remote host.
4	Virtual Drive	Specify the drive that you want to share your data with in the remote host.
5	Share Host	Key in the IP Address or the name of the system you wish to share data with via Windows Share.
6	Share Name	Key in the name of the shared folder you wish to share data with in the remote host.
7	Path to Image	Key in the location of source files that you wish to share via Windows Share.
8	User/ Password (Optional)	Key in the Username and password for the person to access the data that you want to share and click “Set” to enter your selections.

Drive Redirection

The DRIVE REDIRECTION option in the VIRTUAL MEDIA submenu allows you to configure redirection settings. The DRIVE REDIRECTIONS screen (Figure 2-22) and its controls (described in the following table) are shown below.

Figure 2-22. Drive Redirections Screen


acer
Blade System
Virtual Media
Floppy Disk
CD-ROM Image
Drive Redirection
Options
System Health
User Management
KVM Settings
Device Settings
Maintenance
1
Active Image (Drive 1)
2
Active Image (Drive 2)
3
Drive Redirection
4
☐ Disable Drive Redirection *
5
☑ Force read-only connections *
Apply
Reset to defaults
6
7

No disk emulation set.

No disk emulation set.

Drive Redirection allows you to share your local drive (floppy, CD-ROM, removable disks and harddisks) with the remote system.

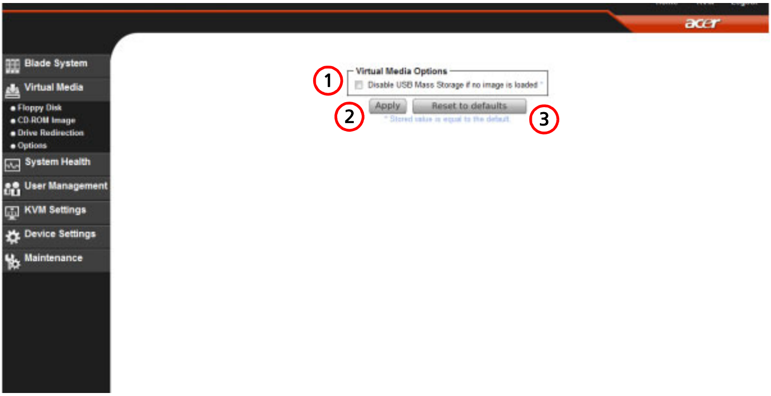
* Stored value is equal to the default.

Item	Name	Description
1	Active Image (Drive1)	This box displays if any virtual device/image has been connected to the remote host.
2	Active Image (Drive2)	This box displays if any virtual device/image has been connected to the remote host.
3	Drive Redirection	Use this box to configure Drive Redirection settings.
4	Disable Drive Redirection	Check the box to disable Drive Redirection. Once this function is disabled, local drives will not be accessible for other remote systems users.
5	Force Read Only	Check this box to allow the data stored in local drives to be read by a remote system, but not overwritten (for data integrity and system security purposes).
6	Apply	After configuring your settings, click “Apply” to initiate drive redirection with the parameters you've set.
7	Reset to Defaults	You can also key in your own setting values and re-set these values as “default” by clicking on this icon to reset the defaults.

Options

The OPTIONS selection in the VIRTUAL MEDIA submenu allows you to configure Virtual Media Options. The OPTIONS screen (Figure 2-23) and its controls (described in the following table) are shown below.

Figure 2-23. Options Screen


acer
Blade System
Virtual Media
Floppy Disk
CD-ROM Image
Drive Redirection
Options
System Health
User Management
KVM Settings
Device Settings
Maintenance
Virtual Media Options
Apply
Reset to defaults
1
2
3

☐ Disable USB Mass Storage if no image is loaded *

* Stored value is equal to the default.

Item	Name	Description
1	Virtual Media Options	Use this option to disable or enable USB mass storage in the remote host. Checking this box prevents data stored in a local drive from being accessed or uploaded by a remote system. The default setting is enabled (unchecked).
2	Apply	Once you've checked the box, click the APPLY icon to initiate.
3	Reset to Defaults	Click this icon if you want to reset the defaults for the Virtual Media Options.

System Health

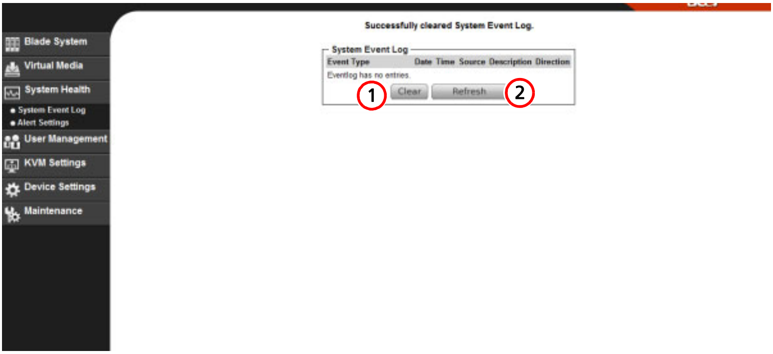
The SYSTEM HEALTH menu allows you to access and configure logs and alert settings in your AB7000 system. Clicking the SYSTEM HEALTH icon allows you to access the following screens through its sub-menus:

-
- Alert Settings

System Event Log

The SYSTEM EVENT LOG option in the SYSTEM HEALTH submenu allows you to view and clear the contents of the system event log for a remote system. The SYSTEM EVENT LOG screen that appears (Figure 2-24) and its controls (described in the following table) are shown below.

Figure 2-24. System Event Log Screen



Successfully cleared System Event Log.

System Event Log

Event Type	Date	Time	Source	Description	Direction

Eventlog has no entries.

Blade System
Virtual Media
System Health
System Event Log
Alert Settings
User Management
KVM Settings
Device Settings
Maintenance
1
Clear
Refresh
2

Item	Name	Description
1	Clear	Click on this icon to clear the event log (delete all entries).
2	Refresh	Click on this icon to refresh the event log.

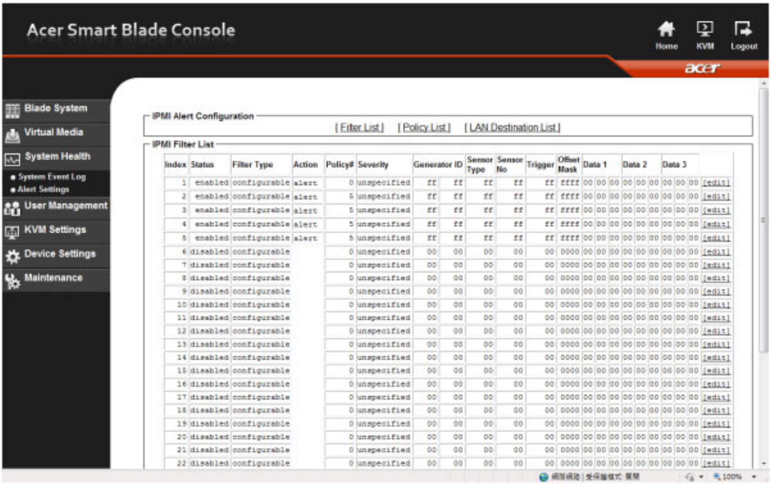
Alert Settings

The ALERT SETTINGS in the SYSTEM HEALTH submenu allow you to set the parameters to be met for a system to issue an alert.

Click on the three headings at the top of the list in the IPMI ALERT CONFIGURATION screen (Figure 2-25) to sort between the three categories. The three headings are:

- **Filter List** – This list shows all filters.
- **Policy List** – This list shows all policies.
- **LAN Destination List** – This list shows LAN destinations.

Figure 2-25. IPMI Alert Configuration Screen



IPMI Alert Configuration

[Filter List] [Policy List] [LAN Destination List]

IPMI Filter List

Index	Status	Filter Type	Action	Policy#	Severity	Generator ID		Sensor Type	Sensor No	Trigger	Offset Mask	Data 1			Data 2			Data 3			
1	enabled	configurable	alert	0	unspecified	ff	ff	ff	ff	ff	ffff	00	00	00	00	00	00	00	00	00	[edit]
2	enabled	configurable	alert	6	unspecified	ff	ff	ff	ff	ff	ffff	00	00	00	00	00	00	00	00	00	[edit]
3	enabled	configurable	alert	5	unspecified	ff	ff	ff	ff	ff	ffff	00	00	00	00	00	00	00	00	00	[edit]
4	enabled	configurable	alert	5	unspecified	ff	ff	ff	ff	ff	ffff	00	00	00	00	00	00	00	00	00	[edit]
5	enabled	configurable	alert	5	unspecified	ff	ff	ff	ff	ff	ffff	00	00	00	00	00	00	00	00	00	[edit]
6	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
7	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
8	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
9	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
10	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
11	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
12	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
13	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
14	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
15	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
16	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
17	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
18	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
19	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
20	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
21	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]
22	disabled	configurable		0	unspecified	00	00	00	00	00	0000	00	00	00	00	00	00	00	00	00	[edit]

User Management

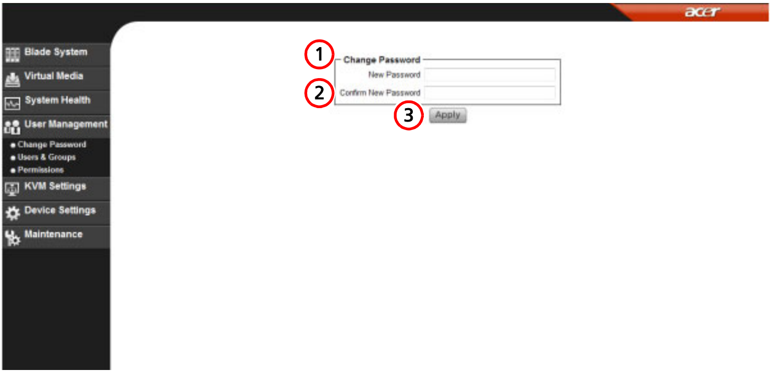
The USER MANAGEMENT menu allows you to configure users for your AB7000 system. Clicking the USER MANAGEMENT icon allows you to access the following screens through its sub-menus:

- Change Password
- Users & Groups
- Permissions

Change Password

The CHANGE PASSWORDS screen (Figure 2-26) is where you can change the password used to access the Acer Smart Blade Console. Its controls are shown in the following table.

Figure 2-26. Change Passwords Screen

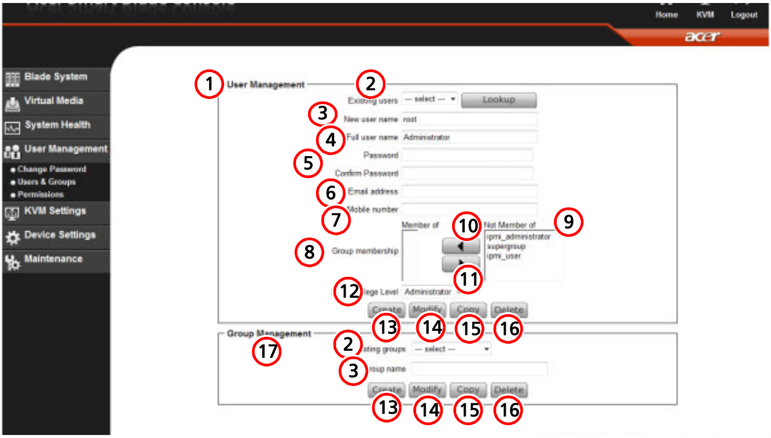

acer
Blade System
Virtual Media
System Health
User Management
Change Password
Users & Groups
Permissions
KVM Settings
Device Settings
Maintenance
1
2
3
Change Password
New Password
Confirm New Password
Apply

Item	Name	Description
1	New Password	Type your new password in the window.
2	Confirm New Password	Type your new password in this second window to confirm.
3	Apply	Click this icon to apply the changes you made.

Users & Groups

The USERS & GROUPS screen (Figure 2-27) is where you specify and manage groups and users, which helps you manage the remote systems you are managing. Its controls are shown in the following table.

Figure 2-27. Users and Groups Screen


Home
KVM
Logout
acer
Blade System
Virtual Media
System Health
User Management
Change Password
Users & Groups
Permissions
KVM Settings
Device Settings
Maintenance
User Management
Existing users
--- select ---
Lookup
Password
Confirm Password
Email address
Mobile number
Member of
Not Member of
ipmi_administrator
supergroup
ipmi_user
Group membership
Create
Modify
Copy
Delete
Group Management
--- select ---
Create
Modify
Copy
Delete
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
2
3
13
14
15
16

New user name root

Full user name Administrator

Privilege Level Administrator

Item	Name	Description
1	User Management Section	This window displays the user's information.
2	Existing users	Select an existing user for information updates. Once a user is selected, click on the Lookup icon on the right to view user information.
3	New user name	Type in a new user name in this field.
4	Full user name	Type in the user's full name in this field.
5	Password and Confirm Password	Type the user's password in the window and then retype the password in the next window to confirm. The password must at least four characters in length.

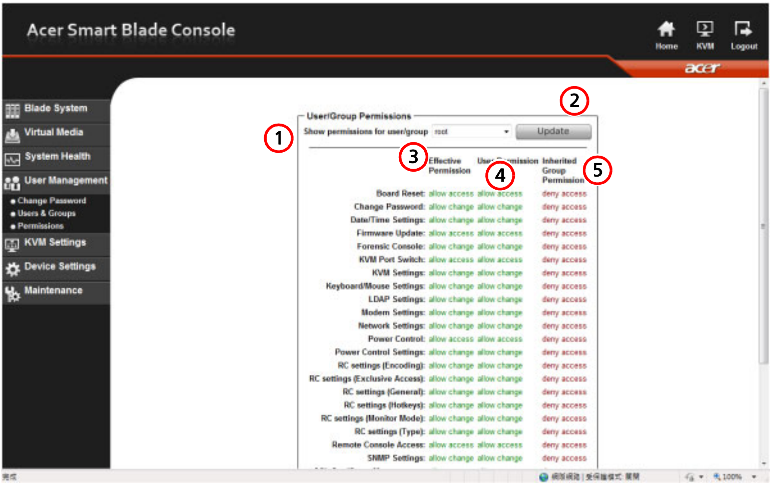
Item	Name	Description
6	Email Address	Type in the user's email address in this window (optional).
7	Mobile Phone	Type in the user's mobile phone number (optional).
8	Group Membership	This field indicates the group that the user belongs to. To select a group, click on the group name in the “Not Member Of” window (9) select it, then click on the backwards arrow (10) to enter the group name in the Group Membership field (8). Reverse the procedure to remove the user from a group.
9	Not Member Of Window	Select a member in this window for assigning to group membership.
10	Backwards Arrow	Use this arrow to add a member to a group membership.
11	Forwards Arrow	Use this arrow to remove a member from group membership.
12	IPMI Privilege Level	Click on the pull-down arrow to activate the Privilege Selection menu. The IPMI Privilege Level contains five categories: No Access, User, Operator, Administrator and OEM.
13	Create	Click this icon to create a new user or group in the User/Group Management fields.
14	Modify	Click this icon to modify a user's or group information in the User/Group Management fields.
15	Copy	Click on this button to copy a user's or group information in the User/Group Management fields. Copy User: select an existing user from the selection box. Enter a new user name in the “New User Name” window. Click the “Copy” icon and a new user with the name you typed in will be created. The properties of the selected user will be copied to the new user. Copy Group: select an existing group from the selection box. Enter a new group name in the “New Group Name” window. Click the “Copy” icon and a new group with the name you typed in will be created. The properties of the selected group will be copied to the new group.

Item	Name	Description
16	Delete	Click on this button to delete a user's or group information in the User/Group Management fields.
17	Group Management	This window allows you to enter group information for better user management. Create and modify groups they same way you do for users.

Permissions

You can use the PERMISSIONS option to grant and deny access to various IPMI functions in the PERMISSIONS screen (Figure 2-28) using its controls (described in the following table).

Figure 2-28. Permissions Screen



User/Group Permissions

Show permissions for user/group: root

	Effective Permission	User Permission	Inherited Group Permission
Board Reset:	allow access	allow access	deny access
Change Password:	allow change	allow change	deny access
Date/Time Settings:	allow change	allow change	deny access
Firmware Update:	allow access	allow access	deny access
Forensic Console:	allow change	allow change	deny access
KVM Port Switch:	allow access	allow access	deny access
KVM Settings:	allow change	allow change	deny access
Keyboard/Mouse Settings:	allow change	allow change	deny access
LDAP Settings:	allow change	allow change	deny access
Modem Settings:	allow change	allow change	deny access
Network Settings:	allow change	allow change	deny access
Power Control:	allow access	allow access	deny access
Power Control Settings:	allow change	allow change	deny access
RC settings (Encoding):	allow change	allow change	deny access
RC settings (Exclusive Access):	allow change	allow change	deny access
RC settings (General):	allow change	allow change	deny access
RC settings (Hotkeys):	allow change	allow change	deny access
RC settings (Monitor Mode):	allow change	allow change	deny access
RC settings (Type):	allow change	allow change	deny access
Remote Console Access:	allow access	allow access	deny access
SNMP Settings:	allow change	allow change	deny access

Item	Name	Description
1	Show Permissions for User/ Group	Click on the pull-down arrow to activate the user/ group permissions selection menu.
2	Update	Click this icon to update the permissions information.
3	Effective Permissions	This field indicates the actual permissions a user or group has.
4	User Permissions	This field indicates the actual permissions a user has.
5	Inherited Group Permission	This field indicates the permissions a user has due to the fact that they belong to a certain group.

KVM Settings

The KVM SETTINGS menu allows you configure keyboard, mouse and console settings. Clicking the KVM SETTINGS icon allows you to access the following screens through its sub-menus:

- User Console
- Keyboard/Mouse

User Console

Selecting the USER CONSOLE option in the KVM SETTINGS submenu brings up the KVM SETTINGS screen (Figure 2-29). Use this screen to set the remote console settings to specific users. This screen has several sections:

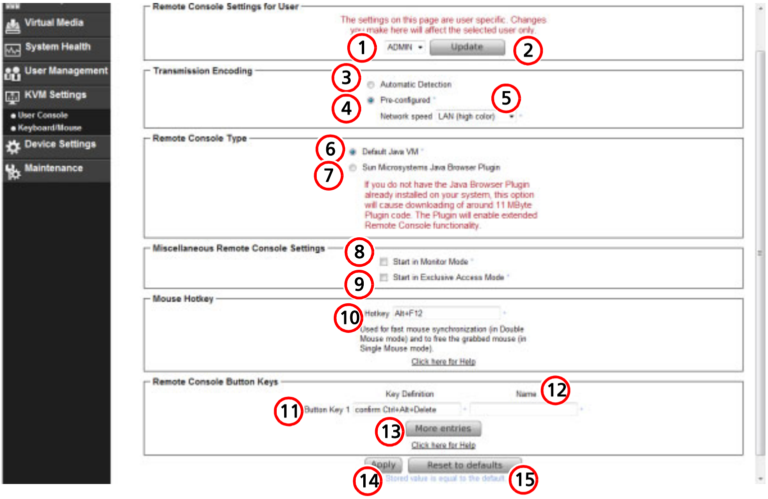
- **Transmission Encoding:** This field allows you to specify how the video data is to be transmitted between the local system and the remote host.
- **Remote Console Type:** This field allows you to decide which remote console viewer to use.
- **Miscellaneous Remote Console Settings:** This field allows you to specify the following Remote Console Settings.
- **Mouse Hotkey:** This option allows you to use a hot key combination to specify either mouse synchronization mode or the single mouse mode.
- **Remote Console Button Keys:** This field allows you to define button keys for the remote host. The button keys allow simulating keystrokes on a remote host or issuing commands to a remote system. The button keys are needed when you have a missing key or when you want to prevent interference caused to the local system.

Note: After a remote console button key is set, it will appear on the right upper corner of the remote monitor screen as shown in Figure 2-29.

For further detailed instructions in creating button keys, please click on the CLICK HERE FOR HELP link.

The controls found in the above sections are shown and described in detail in the following table.

Figure 2-29. KVM Settings Screen



Virtual Media
System Health
User Management
KVM Settings
User Console
Keyboard/Mouse
Device Settings
Maintenance
Remote Console Settings for User
Update
Transmission Encoding
Remote Console Type
Miscellaneous Remote Console Settings
Mouse Hotkey
Click here for Help
Remote Console Button Keys
Key Definition
Name
More entries
Click here for Help
Apply
Reset to defaults
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15

The settings on this page are user specific. Changes you make here will affect the selected user only.

ADMIN

○ Automatic Detection

● Pre-configured

Network speed LAN (high color)

● Default Java VM

○ Sun Microsystems Java Browser Plugin

If you do not have the Java Browser Plugin already installed on your system, this option will cause downloading of around 11 MByte Plugin code. The Plugin will enable extended Remote Console functionality.

☐ Start in Monitor Mode

☐ Start in Exclusive Access Mode

Hotkey Alt+F12

Used for fast mouse synchronization (in Double Mouse mode) and to free the grabbed mouse (in Single Mouse mode).

Button Key 1 confirm Ctrl+Alt+Delete

Stored value is equal to the default.

Item	Name	Description
1	User Selection	This field allows you to decide which group the user belongs to. Click on the arrow on the right to activate the pull-down menu and highlight the name of the group to select it.
2	Update	Once you've selected the group name, click on UPDATE to save the selections.

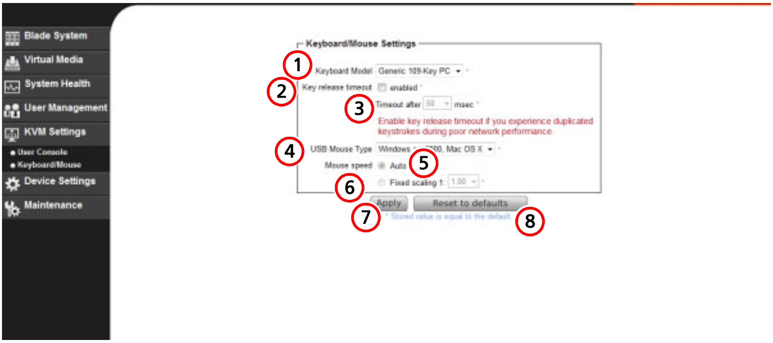
Item	Name	Description
3	Automatic Detection	Select this option to allow the CMM to automatically detect the networking configuration settings (such as the bandwidth of the connection line) and transmit data accordingly.
4	Pre-configured	This item allows the user to select the data transmission settings from a pre-defined options list. The pre-configured settings will provide the best results because the compression and color depth settings will be adjusted for optimization based on the network speed indicated.
5	Network speed	Once you've selected the PRE-CONFIGURED option above, you then can select a desired network speed setting from the pull-down menu by clicking on the arrow.
6	Default Java VM (JVM)	Select this option to use the default Java Virtual Machine of your web browser. This can be the Microsoft JVM for Internet Explorer or the Sun JVM depending on the configuration of your browser.
7	Sun Microsystems Java Browser Plugin	Select this option when the JVM used to run the code for the Remote Console is a Java Applet. If using this function for the first time and the appropriate Java plugin is not yet installed in your system, you may download and install it automatically. To download and install, you need to check YES in the dialog boxes. Downloading Sun's JVM will allow you to use a stable and identical JVM across different platforms. NOTE: If your internet connection is slow, please pre-install JVM on your administration system.
8	Start in Monitor Mode	Check this box to enable **Start in Monitor Mode**, which allows data to be displayed on the remote monitor as soon as the Remote Console is activated. NOTE: The data displayed in the remote monitor is ready-only.
9	Start in Exclusive Access Mode	Check this box to enable the exclusive access mode immediately upon Remote Console startup, which will force all other users connected to the network to close. No other users can open the Remote Console until you disable this function or log off.

Item	Name	Description
10	Hotkey	Enter a hot key combination in the box to specify either mouse synchronization mode or the single mouse mode.
11	Button Keys	Enter the syntax of a button key in the box. For detailed instructions on creating button keys, please click on the “Click here for Help” link.
12	Name	Type in the name of a button key in the box. For detailed instructions on creating button keys, please click on the CLICK HERE FOR HELP link.
13	More Entries	Click on this icon to create more button keys.
14	Apply	Click this icon to apply the selections you made.
15	Reset to Defaults	Click this icon if you want to reset the defaults for the Remote Console button keys.

Keyboard/Mouse

Selecting the KEYBOARD/MOUSE option in the KVM SETTINGS submenu allows you to specify the parameters for the keyboard and mouse on the KEYBOARD/MOUSE screen (Figure 2-30). The controls for this screen are shown and explained in the following table.

Figure 2-30. Keyboard/Mouse Screen



Keyboard/Mouse Settings

Keyboard Model: Generic 109-Key PC *

Key release timeout: ☐ enabled *

Timeout after 50 msec *

Enable key release timeout if you experience duplicated keystrokes during poor network performance.

USB Mouse Type: Windows >= 2000, Mac OS X *

Mouse speed: ● Auto

○ Fixed scaling 1: 1.00 *

* Stored value is equal to the default

Blade System
Virtual Media
System Health
User Management
KVM Settings
User Console
Keyboard/Mouse
Device Settings
Maintenance
Apply
Reset to defaults
1
2
3
4
5
6
7
8

Item	Name	Description
1	Keyboard Model	Click the arrow for the pull-down menu to specify the type of keyboard.
2	Key Release Timeout	Check this box to enable the function of KEY RELEASE TIMEOUT, which sets the time limit for a key to be pressed by the user.
3	Timeout after____ msec	If the KEY RELEASE TIMEOUT check box has been enabled, click on the arrow to select the time-out setting in the pull-down menu.
4	USB Mouse Type	For a USB mouse to function properly, please select the correct operating system for your system from the pull-down menu by clicking on the arrow.
5	Mouse Speed-Auto	Click the check box to allow your system to automatically set your mouse speed.
6	Fixed Scaling	You can also check the FIXED SCALING check box and manually set the mouse speed with the pull-down menu.
7	Apply	Click on this icon to enter your selections.
8	Reset to defaults	Click this icon to cancel your selections and use the default values that have been pre-set by the manufacturer.

Device Settings

Use the DEVICE SETTINGS menu for configuring network, security and log settings for your AB7000 system. Clicking the DEVICE SETTINGS icon allows you to access the following screens through its sub-menus:

- Network
- Dynamic DNS
- Security
- Event Log

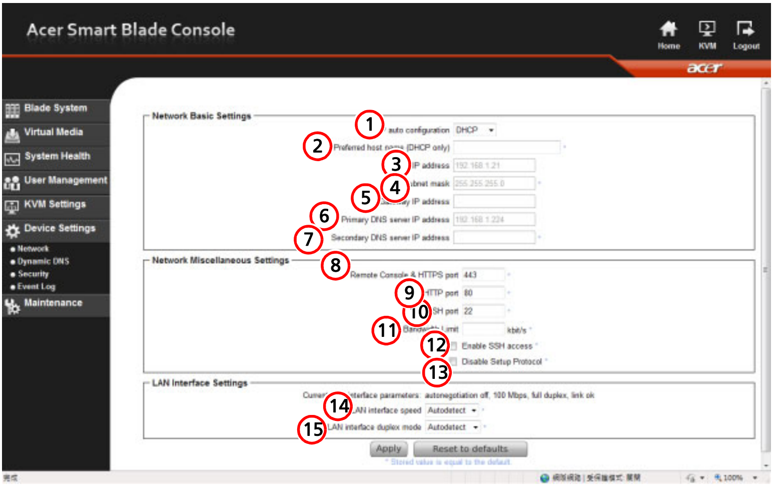
Network

Clicking the NETWORK option in the DEVICE SETTINGS submenu brings up the NETWORK screen (Figure 2-31). Use the below fields in the screen to specify network parameters.

- **Network Miscellaneous Setting:** This field allows the user to configure miscellaneous network settings.
- **LAN Interface Settings:** This field allows the user to configure LAN Interface settings.

The controls in these fields are shown and detailed in the following table.

Figure 2-31. Network Screen


Acer Smart Blade Console
Home
KVM
Logout
acer
Blade System
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Network
Dynamic DNS
Security
Event Log
Maintenance
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
Apply
Reset to defaults

Network Basic Settings

auto configuration DHCP
Preferred host n (DHCP only)
IP address 192.168.1.21
bnet mask 255.255.255.0
y IP address
Primary DNS server IP address 192.168.1.224
Secondary DNS server IP address

Network Miscellaneous Settings

Remote Console & HTTPS port 443
TTP port 80
SH port 22
Bandw Limit kbit/s
☐ Enable SSH access
☐ Disable Setup Protocol

LAN Interface Settings

Curren terface parameters: autonegotiation off, 100 Mbps, full duplex, link ok
LAN interface speed Autodetect
LAN interface duplex mode Autodetect

* Stored value is equal to the default.

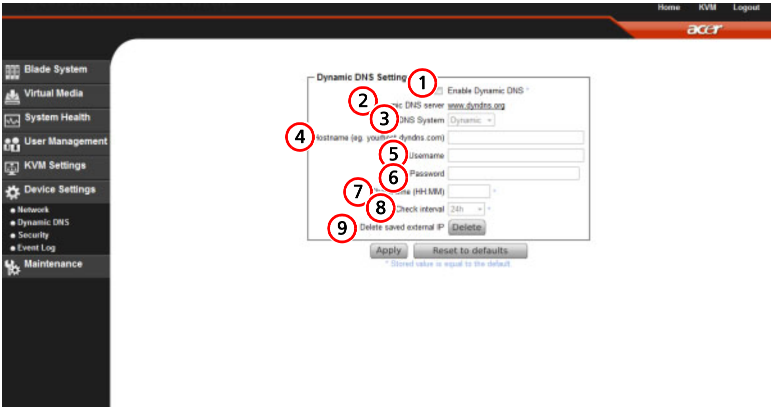
Item	Name	Description
1	IP uto A Configuration	Click on the pull-down menu to select a desired item from the list. The options are None, DHCP, and BOOTP.
2	Preferred Host Name (DHCP only)	Enter a preferred host name here.
3	IP Address	Enter the IP address for the remote host here.
4	Subnet Mask	Enter the subnet mask of the local network here.
5	Acer IP Address	Enter the local network router's IP address here to provide accessibility for users that are not connected to the local network.
6	Primary DNS Server IP Address	Enter the IP address of the Primary Domain Name Server here.

Item	Name	Description
7	Secondary DNS Server IP Address	Enter the IP address of the Secondary Domain Name Server in the box. It will be used when the Primary DNS Server cannot be contacted.
8	Remote Console & HTTPS Port	Enter the port numbers the remote host and the HTTP server are listening. If a number is not entered in the box, the default value will be used.
9	HTTP Port	Enter the port number the of the HTTP server. If a number is not entered in the box, the default value will be used.
10	SSH Port	Enter the port number of the SSH server. If a number is not entered in the box, the default value will be used.
11	Bandwidth Limit	Enter the maximum bandwidth value for network interfacing. The value should be in Kbits per second.
12	Enable SSH Access	Click this box to enable SSH access.
13	Disable Setup Protocol	Check this box to disable the setup protocol function of the Ethernet switch module.
14	LAN Interface Speed	Click on the arrow on the right to select a desired LAN interface speed from the pull-down menu. The options are Auto-detect, 10 Mbps or 100 Mbps. If Auto-detect is selected, the optimized speed will be set based on the system configurations detected by the OS.
15	LAN Interface Duplex Mode	Click on the arrow on the right to select a desired LAN interface duplex mode from the pull-down menu. The options are AUTO-DETECT, HALF DUPLEX and FULL DUPLEX. If Auto-detect is selected, the LAN INTERFACE DUPLEX MODE will be set to the optimized setting based on the system configurations detected by the OS.

Dynamic DNS

Selecting the DYNAMIC DNS option from the DEVICE SETTINGS submenu brings up the DYNAMIC DNS SETTINGS screen (Figure 2-32). Use this screen to configure Dynamic DNS settings. Controls for this screen are shown and detailed in the following table.

Figure 2-32. Dynamic DNS Settings Screen



Home
KVM
Logout
acer
Blade System
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Network
Dynamic DNS
Security
Event Log
Maintenance
Dynamic DNS Setting
1
Enable Dynamic DNS *
2
3
4
5
6
7
8
9
Delete
Apply
Reset to defaults

☐ Enable Dynamic DNS *

…ic DNS server www.dyndns.org

…NS System: Dynamic

…ostname (eg. yourhost.dyndns.com)

Username

Password

…ime (HH:MM) *

Check interval: 24h *

Delete saved external IP

* Stored value is equal to the default

Item	Name	Description
1	Enable Dynamic DNS	Check this box to enable Dynamic DNS.
2	Dynamic DNS Server Link	Click the www.dyndns.org: link to access the DynDNS web site. This is the server name where the DDNS Service is registered.
3	DNS System	If Dynamic DNS is enabled, you can select either CUSTOM or DYNAMIC from the pull-down menu. Select CUSTOM to use your own system as the DNS server. Select DYNAMIC to use the pre-configured Dynamic DNS as your server.
4	Hostname	Enter the name you want to use for the remote host server.
5	Username	Enter the username for the remote host user.

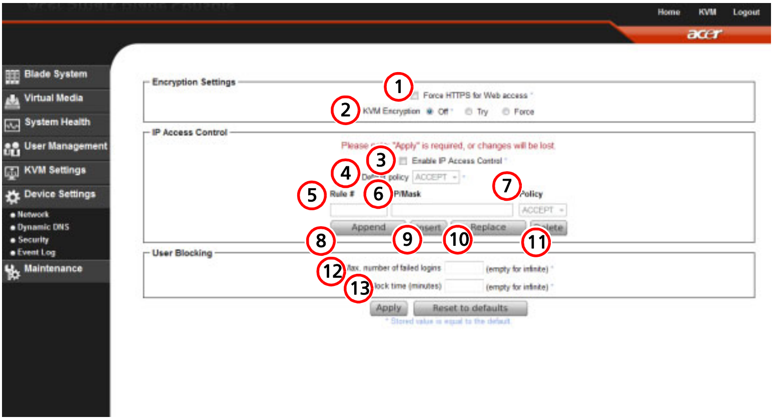
Item	Name	Description
6	Password	Enter the password for the remote host user.
7	Check time (HH:MM)	Enter the time the CMM first registers with the DNS server in the **HH:MM** format (such as: 07:25 or 19:30).
8	Check Interval	Enter the time interval for the IPMI to report to the Dynamic DNS again.
9	Delete Saved External IP Address	Click this icon to delete the IP address for an external system that has been previously entered and saved.

Security

Selecting the SECURITY option from the DEVICE SETTINGS submenu brings up the SECURITY screen (Figure 2-33). Use this screen to configure the Security settings. Controls for this screen are shown and detailed in the following table.

- **Encryption Settings:** This field allows you to configure encryption settings.
- **IP Access Control:** This section allows you to configure the IP Access Control settings listed below.
- **User Blocking:** This field allows you to set the user blocking conditions.

Figure 2-33. Security Screen


Home
KVM
Logout
acer
Blade System
Virtual Media
System Health
User Management
KVM Settings
Device Settings
• Network
• Dynamic DNS
• Security
• Event Log
Maintenance
Encryption Settings
1
☐ Force HTTPS for Web access *
2
KVM Encryption ● Off * ○ Try ○ Force
IP Access Control
Please note: "Apply" is required, or changes will be lost
3
☐ Enable IP Access Control *
4
Default policy ACCEPT *
5
Rule #
6
IP/Mask
7
Policy
ACCEPT
Append
Insert
Replace
Delete
8
9
10
11
User Blocking
12
Max. number of failed logins (empty for infinite) *
13
Block time (minutes) (empty for infinite) *
Apply
Reset to defaults
* Stored value is equal to the default

Item	Name	Description
1	Force HTTPS for Web Access	Check this box to enable Force HTTPS for Web Access. If enabled, you will need to use an HTTPS connection to access the web.
2	KVM Encryption	This option allows you to configure the encryption of the RFB protocol. RFB is used by the remote host to transmit video data displayed in the host monitor to the local administrator machine and to transmit keyboard and mouse data from the local administrator machine back to the remote host. If set to OFF, no encryption will be used. If set to TRY, the applet (JVM of the remote host) will attempt to make an encrypted connection. In this case, when a connection cannot be established, an unencrypted connection will be used. If set to FORCE, the applet will make an encrypted connection. In this case, an error will be reported if no connection is made.
3	Enable IP Access Control	Check this box to enable IP Access Control. This function is used to limit user access to the network by identifying them by their IP address (available to the LAN interface only.)

Item	Name	Description
4	Default Policy	When IP ACCESS CONTROL is enabled, you can select either Accept or Drop from this pull-down menu to either allow or deny access according to pre-defined rules. NOTE: If set to DROP and you do not have a set of rules that will accept the Internet connection, then an Internet connection over the LAN is impossible. In this case, you need to change your security settings via modem or by disabling the IP ACCESS CONTROL.
5	Rule#	Enter a rule number in the box for a command (or commands) that will be used by the IP ACCESS CONTROL.
6	IP/Mask	Enter the IP address or an IP address range for which the command(s) will be applied.
7	Policy	This item instructs the IPMI what to do with the matching packages. NOTE: The sequence or the order of the rules is important; rules are checked in ascending order until one matches. All rules below the matching one will be ignored. The default policy applies if no matching rules are found.
8	Append	Select this option to add IP Address/Mask, rules or commands to the existing ones.
9	Insert	Select this option to insert IP Address/Mask, rules or commands to the existing ones.
10	Replace	Select this option to replace an old IP Address/Mask, rule or command with a new one.
11	Delete	Select this option to delete (a part of) an existing IP Address/Mask, rule or command.
12	Max. Number of Failed Logins	Enter the maximum number of failed attempts or failed logins allowed for a user. If the number of failed logins or attempts exceeds this maximum number allowed, the user will be blocked from the system. NOTE: If this box is left empty, the user is allowed to try to login to the server indefinitely. For network security, this is not recommended.

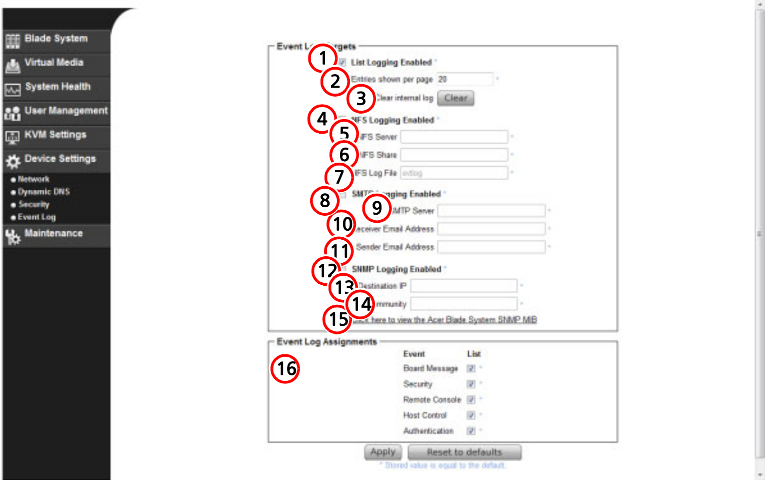
Item	Name	Description
13	Block Time (Minutes)	Enter the number of minutes allowed for a user to attempt to login. If the user fails to login within this time allowed, the user will be blocked from system. NOTE: If this box is left empty, the user is allowed to try to login to the server indefinitely. For network security, this is not recommended.

Event Log

Selecting the EVENT LOG option from the DEVICE SETTINGS submenu brings up the DEVICE SETTINGS EVENT LOG screen (Figure 2-34). Use this screen to set event log targets and assignments. Controls for this screen are shown and detailed in the following table.

- **Event Log Targets:** This section allows you to manually set the event log targets and settings.
- **Event Log Assignments:** This window allows you to specify the types and the destination for the event logging.

Figure 2-34. Device Settings Event Log Screen


Blade System
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Network
Dynamic DNS
Security
Event Log
Maintenance
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
Clear
Apply
Reset to defaults

Event L rgets

☑ List Logging Enabled *

Entries shown per page 20 *

Clear internal log

FS Logging Enabled *

FS Server *

FS Share *

FS Log File evtlog *

SMT gging Enabled *

MTP Server *

eceiver Email Address *

Sender Email Address *

SNMP Logging Enabled *

Destination IP *

mmunity *

here to view the Acer Blade System SNMP MIB

Event Log Assignments

Event	List
Board Message	☑ *
Security	☑ *
Remote Console	☑ *
Host Control	☑ *
Authentication	☑ *

* Stored value is equal to the default.

Item	Name	Description
1	List Logging Enabled	Check this box to activate the event-logging list. To show the event log list, click on EVENT LOG under SYSTEM HEALTH. NOTE: The maximum number of log list entries is 1,000 events. Every entry that exceeds this limit will automatically override the oldest one in the list. If the reset button is pressed, all logging information will be saved, however, all logging data will be lost if a hard reset is performed or the system loses power.
2	Entries Shown Per Page	Enter the number of entries you want to display on a page.
3	Clear Internal Log	Click this icon to clear the internal event log from memory.
4	NFS Logging Enabled	Click this box to enable NFS Logging, which will create a Network File System (NFS) for the event logging data to be written into.
5	NFS Server	Enter the IP Address of the NFS server here.
6	NFS Share	Enter the path of the Network File System in which the event logging data is stored.
7	NFS Log File	Enter the filename of the Network File System in which the event logging data is stored.
8	SMTP Logging Enabled	Check this box to enable the SMTP (Simple Mail Transfer Protocol) logging.
9	SMTP Server	Enter the IP Address for the SMTP server.
10	Receiver Email Address	Enter the email address that the SMTP event logging data will be sent to.
11	Sender Email Address	Enter the email address from which the SMTP event logging data is sent.

Item	Name	Description
12	SNMP Logging Enabled	Check this box to enable SNMP (Simple Network Management Protocol) logging.
13	Destination IP	Enter the IP address where the SNMP trap will be sent to.
14	Community	Enter the name of the community if the receiver requires a community string.
15	Click here to view the Acer Blade System SNMP MIB	Click this link to see the SNMP MIB.
16	Event Log Assignments	Check the check boxes in this section to include the designated assignment to the event log.

Maintenance

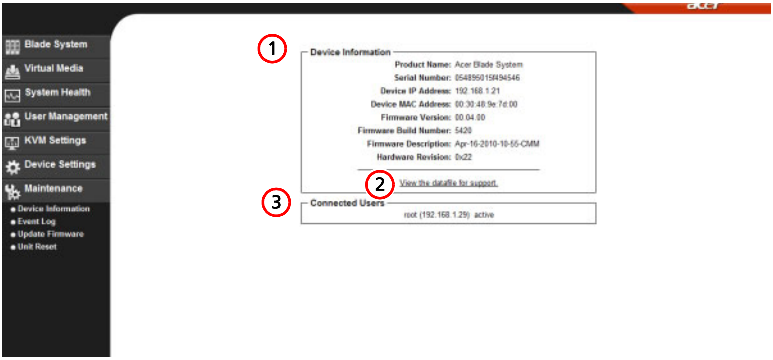
Use the MAINTENANCE menu for maintenance configurations on your AB7000 system. Clicking the MAINTENANCE icon allows you to access the following screens through its sub-menus:

- Device Information
- Event Log
- Update Firmware
- Unit Reset

Device Information

Clicking the DEVICE INFORMATION option in the MAINTENANCE submenu brings up the DEVICE INFORMATION screen (Figure 2-35), which provides system information. The controls for this screen are detailed in the following table.

Figure 2-35. Device Information Screen


Blade System
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Maintenance
Device Information
Event Log
Update Firmware
Unit Reset
1
2
3
View the datafile for support.

Device Information

Product Name: Acer Blade System
Serial Number: 054895015f494546
Device IP Address: 192.168.1.21
Device MAC Address: 00:30:48:9e:7d:00
Firmware Version: 00.04.00
Firmware Build Number: 5420
Firmware Description: Apr-16-2010-10-55-CMM
Hardware Revision: 0x22

Connected Users

root (192.168.1.29) active

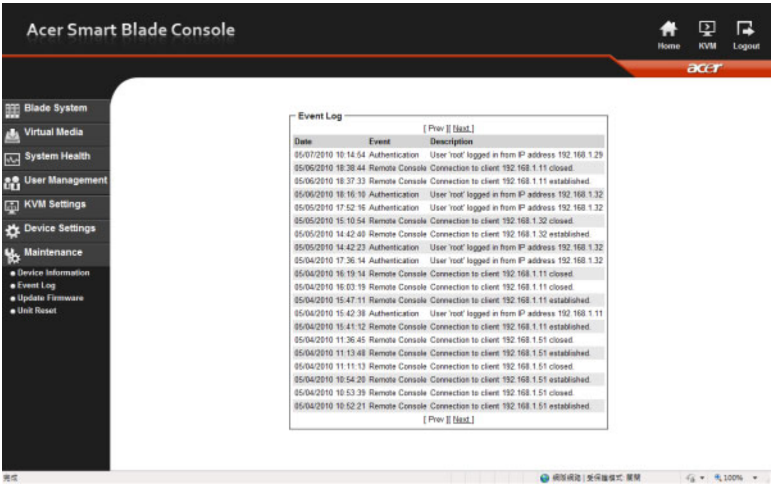
Item	Name	Description
1	Device Information	This field displays information on the CMM and its firmware.
2	View the Data File for Support	Click on this link to view the XML file which contains product information that is needed for technical support.

Item	Name	Description
3	Connected Users	List the name(s), the IP Address(es) and the status of the connect user(s).

Event Log

Clicking the EVENT LOG option in the MAINTENANCE submenu brings up the MAINTENANCE EVENT LOG LIST screen (Figure 2-36). This screen contains information on events that are recorded by the CMM in the order of Date/Time, Types and Descriptions including the IP address(es), user(s) and activities involved.

Figure 2-36. Maintenance Event Log List Screen



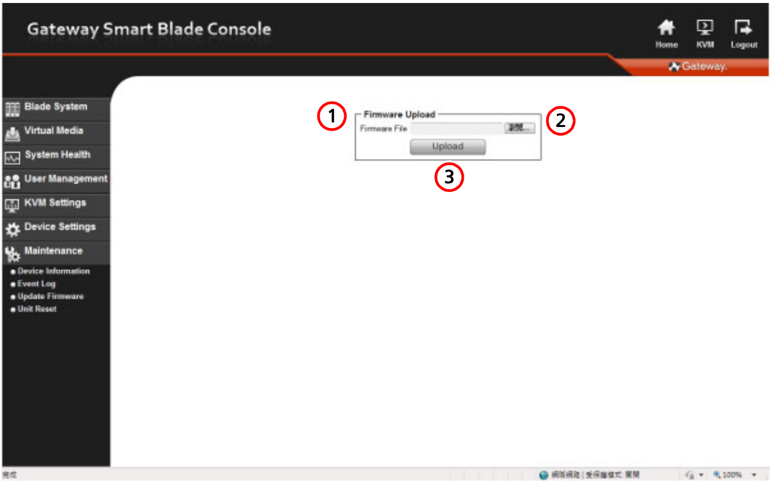
Date	Event	Description
05/07/2010 10:14:54	Authentication	User 'root' logged in from IP address 192.168.1.29
05/06/2010 18:38:44	Remote Console	Connection to client 192.168.1.11 closed.
05/06/2010 18:37:33	Remote Console	Connection to client 192.168.1.11 established.
05/06/2010 18:16:10	Authentication	User 'root' logged in from IP address 192.168.1.32
05/05/2010 17:52:16	Authentication	User 'root' logged in from IP address 192.168.1.32
05/05/2010 15:10:54	Remote Console	Connection to client 192.168.1.32 closed.
05/05/2010 14:42:40	Remote Console	Connection to client 192.168.1.32 established.
05/05/2010 14:42:23	Authentication	User 'root' logged in from IP address 192.168.1.32
05/04/2010 17:36:14	Authentication	User 'root' logged in from IP address 192.168.1.32
05/04/2010 16:19:14	Remote Console	Connection to client 192.168.1.11 closed.
05/04/2010 16:03:19	Remote Console	Connection to client 192.168.1.11 closed.
05/04/2010 15:47:11	Remote Console	Connection to client 192.168.1.11 established.
05/04/2010 15:42:38	Authentication	User 'root' logged in from IP address 192.168.1.11
05/04/2010 15:41:12	Remote Console	Connection to client 192.168.1.11 established.
05/04/2010 11:36:45	Remote Console	Connection to client 192.168.1.51 closed.
05/04/2010 11:13:48	Remote Console	Connection to client 192.168.1.51 established.
05/04/2010 11:11:13	Remote Console	Connection to client 192.168.1.51 closed.
05/04/2010 10:54:20	Remote Console	Connection to client 192.168.1.51 established.
05/04/2010 10:53:39	Remote Console	Connection to client 192.168.1.51 closed.
05/04/2010 10:52:21	Remote Console	Connection to client 192.168.1.51 established.

Update Firmware

Clicking the UPDATE FIRMWARE option in the MAINTENANCE submenu brings up the UPDATE FIRMWARE screen (Figure 2-37). This screen is where you can update the firmware for the CMM module. The controls for this screen are detailed in the following table.

Note: This process is not reversible once the firmware is updated, so proceed with caution. It might take a few minutes to complete this procedure.

Figure 2-37. Update Firmware Screen

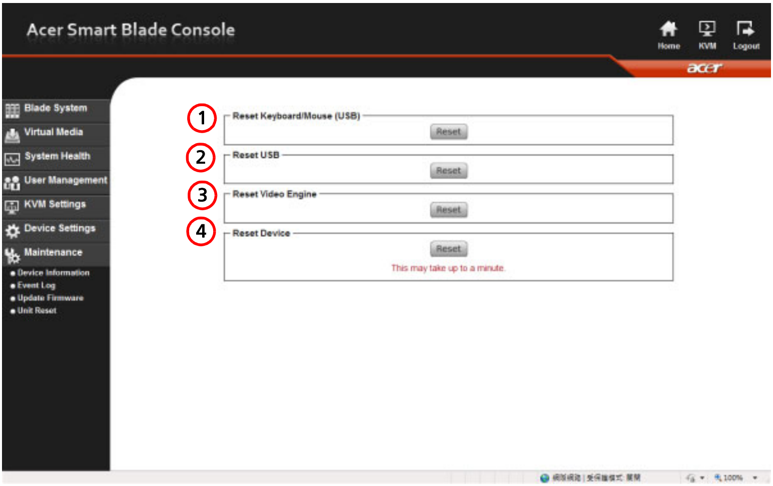

Gateway Smart Blade Console
Home
KVM
Logout
Gateway.
Blade System
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Maintenance
Device Information
Event Log
Update Firmware
Unit Reset
1
Firmware Upload
Firmware File
2
Upload
3
100%

Item	Name	Description
1	Firmware File	Enter the name of the firmware you want to update or click Browse to select the file.
2	Browse Button	Click the Browse button to select the firmware file.
3	Upload	Click on the Upload icon to upload the firmware file to the server for the update.

Unit Reset

Clicking the Unit Reset option in the Maintenance submenu brings up the Unit Reset screen (Figure 2-38), which allows you to reset USB and Device components. The controls for this screen are detailed in the following table.

Figure 2-38. Unit Reset Screen


Acer Smart Blade Console
Home
KVM
Logout
acer
Blade System
Virtual Media
System Health
User Management
KVM Settings
Device Settings
Maintenance
Device Information
Event Log
Update Firmware
Unit Reset
1
Reset Keyboard/Mouse (USB)
Reset
2
Reset USB
Reset
3
Reset Video Engine
Reset
4
Reset Device
Reset

This may take up to a minute.

Item	Name	Description
1	Reset Keyboard/ Mosue (USB)	Click the RESET icon to reset the Keyboard/ Mouse.
2	Reset USB	Click the RESET icon to reset the USB module.
3	Reset Video Engine	Click the RESET icon to reset the Video Engine module.
4	Reset Device	Click the RESET icon to cold reset the utility's firmware.

Remote Console

This chapter covers the use of the Remote Console in the Acer Smart Blade Console. Activating the remote console may be done in two ways:

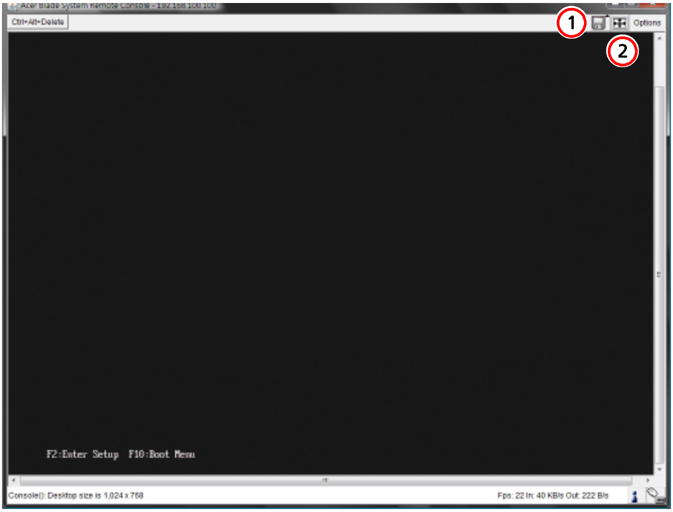
- **Home Page:** On the HOME page, click on the CONSOLE icon in the upper left area of the screen.
- **Blade System Menu:** Click the BLADE SYSTEM icon on the left of the screen, then click BLADE in the submenu. A screen will open with a list of blades.

  The blade units listed are hyperlinks - click one of these to open a screen giving details on that blade unit. In each screen you will see a REMOTE CONSOLE PREVIEW pane. At the top is a link that reads CLICK TO OPEN. Click this link to open the remote console.

Remote Console Interface Screen

Whatever option you use, it allows the local host to interact with a remote server through the REMOTE CONSOLE INTERFACE screen (Figure 2-39). This screen allows you to share files stored in the local drive with a user connected to the remote server, download data from a local drive to the remote server, issue commands to manage the remote server or allow the remote server be controlled and managed by a local user logged in to the remote server (see the following table for a list of controls). This function provides a full spectrum of remote console interaction and management.

Figure 2-39. Remote Console Interface Screen


Acer Blade System Remote Console - 192.168.100.100
Ctrl+Alt+Delete
Options
1
2

```
F2:Enter Setup  F10:Boot Menu
```

Console(): Desktop size is 1,024 x 768

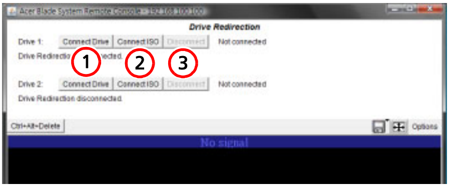
Fps: 22 In: 40 KB/s Out: 222 B/s

Item	Name	Description
1	Drive Screen Button	Click on this button to open and display the DRIVE REDIRECTION screen and its controls. See "Drive Redirection Screen" below for details.
2	Adjust Screen Button	Click on this button to adjust the screen size.

Drive Redirection Screen

The DRIVE REDIRECTION screen is shown in Figure 2-40 and its controls are listed in the following table.

Figure 2-40. Drive Redirection Screen


Acer Blade System Remote Console - 192.168.100.100
Drive Redirection
Drive 1:
Connect Drive
Connect ISO
Disconnect
1
2
3
Drive 2:
Connect Drive
Connect ISO
Disconnect
Ctrl+Alt+Delete
Options
No signal

Drive 1: Not connected

Drive 2: Not connected

Drive Redirection disconnected.

Item	Name	Description
1	Connect Drive	Click this button to bring up a window with secondary controls for Local Drive list, Refresh, Sending Commands and Write Support (see below for details on these controls). Once you have clicked CONNECT, users logged into remote servers will have access to the local drive that you have selected.
2	Connect ISO	Click this button to allow you to redirect an CD/DVD ISO image.
3	Disconnect	Click this button to cancel the connection established between a local drive and a remote server. Once you click this button, the drive you have selected will not be accessible for remote console interface.
Local Drive List		This pull-down menu displays a list of local drives available for remote access. Select from the list a local drive that you want to make accessible for a remote server.
Refresh		Click this button to refresh the local drive list.

Item	Name	Description
Write Support		Check this button to allow the remote operating system to have write access to the drive that you have selected. This function allows a user to alter, overwrite, erase and destroy data stored in the drive selected and therefore should only be used on drives with non-critical data. When Write Support is checked, a warning message will display. Read the warning message carefully before enabling this function.
Sending Commands		This functions allows the user to issue a pre-defined command to a remote server for execution.

To use this function, you need to click the Floppy hot key button displayed on the upper right corner of the screen.

Note: Hot keys are commands that have been pre-defined and pre-stored in a remote consoles.

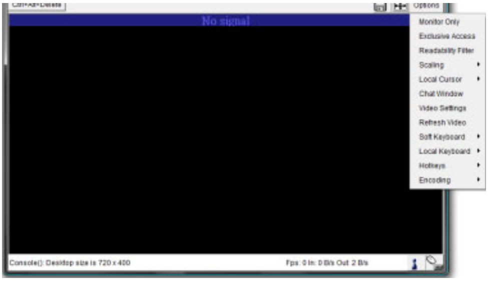
Click the Ctrl+Alt+Delete button to send the command Ctrl+Alt+Delete to the remote server for execution.

Once you have clicked on the button, it displays a message asking you to confirm if you really want to send Ctrl+Alt+Delete. Click Yes to confirm or click Cancel to cancel sending the command for remote execution.

Remote Console Options

After the remote console screen appears, click on Option in the upper right corner to display the Options menu as shown in Figure 2-41.

Figure 2-41. Remote Console Options


Ctrl+Alt+Delete
Options
No signal
Monitor Only
Exclusive Access
Readability Filter
Scaling
Local Cursor
Chat Window
Video Settings
Refresh Video
Soft Keyboard
Local Keyboard
Hotkeys
Encoding
Console(): Desktop size is 720 x 400
Fps: 0 In: 0 B/s Out: 2 B/s

The following items are included in the OPTIONS Menu and described in more detail in the sections below:

- Monitor Only
- Exclusive Access
- Readability Filter
- Scaling
- Local Cursor
- Chat Window
- Video Settings
- Soft Keyboard
- Local Keyboard
- Hotkeys
- Encoding

Monitor Only

Click MONITOR ONLY to turn the *Monitor Only* function on or off. If MONITOR ONLY is selected, the KB/MOUSE icon on the lower right corner will be crossed out as shown in Figure 2-39, and the user can only view or monitor remote console activities. Also, any remote console interaction will no longer be available.

Exclusive Access

With the appropriate permission, a user can force other users to quit the remote console and claim the console for their own exclusive use by clicking on EXCLUSIVE ACCESS. When this function is selected, the second user icon on the lower left corner of the screen will be crossed out.

Readability Filter

Click on this to turn the *Readability Filter* on or off. Turn on this function to preserve most of the screen details even when the screen image is substantially scaled down.

Note: This item is available for systems with JVM 1.4 or higher.

Scaling

This item allows the user to scale the remote console screen to the desired size. Click on this button to access its submenu and select the desired setting from the options listed in the submenu: 25%, 50%, 100% and SCALE TO FIT.

Local Cursor

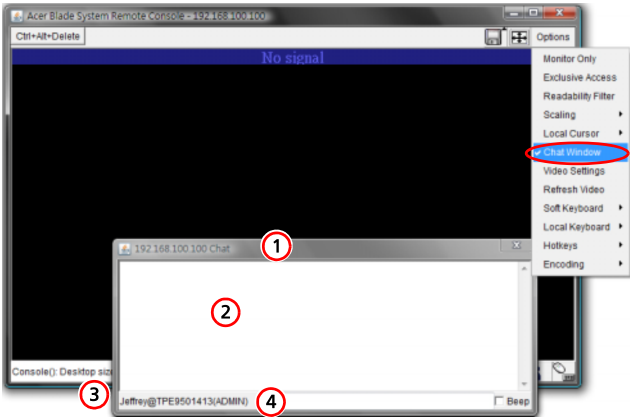
This item allows the user to choose the desired shape for the local cursor. Click on this button to access its submenu and select a desired shape from the options listed in the submenu: TRANSPARENT, DEFAULT, BIG, PIXEL and CROSS-HAIR. The availability of the shapes depends on the Java Virtual Machine used.

Chat Window

This item allows the user to communicate with other users logged in to the same remote host. The screen below shows a CHAT WINDOW displayed in a scaled down remote console screen (see Figure 2-42). The window's controls are shown in the following table.

Note: Once you've typed a message in the chat line box and pressed <ENTER>, your message will be sent to remote systems and read by other users. Please review the text displayed in the chat line box before you hit <ENTER>.

Figure 2-42. Chat Window

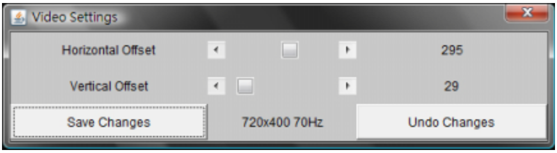

Acer Blade System Remote Console - 192.168.100.100
Ctrl+Alt+Delete
Options
No signal
Monitor Only
Exclusive Access
Readability Filter
Scaling
Local Cursor
✓ Chat Window
Video Settings
Refresh Video
Soft Keyboard
Local Keyboard
Hotkeys
Encoding
192.168.100.100 Chat
①
②
Console(): Desktop siz
③
Jeffrey@TPE9501413(ADMIN)
④
☐ Beep

Item	Name	Description
1	Title Bar	This shows the IP address of the remote host you are connected to.
2	Chat Window Frame	This frame displays chat messages, including your own messages that have been sent to other users. This is a read-only test display area.
3	User's Identity Label	This line displays your own identity.
4	Chat Line	This is an editable text line where you can enter a new message.

Video Settings

This item allows the user to set the monitor display settings by clicking on the Video Settings button. After you've clicked the Video Settings button, the submenu displays as shown in Figure 2-43.

Figure 2-43. Video Settings



Horizontal Offset 295

Vertical Offset 29

720x400 70Hz

Use your cursor pointer to click on the left and right arrows to adjust the setting for the Horizontal Offset and Vertical Offset.

If you are not happy with the changes you've made, you can click on the Undo Changes button to abandon the changes. To save all changes, click on the Save Changes button.

Soft Keyboard

This item allows the user to use the soft keys that have been pre-installed in the *Soft Keyboard* of the particular language selected. Click on Show Button to show a soft keyboard which contains pre-installed soft keys (see Figure 2-44). Click on Mapping to display a list of major world languages. When the language list displays, select the language you want to use by clicking on it (see Figure 2-45).

Figure 2-44. Keys in English Soft Keyboard

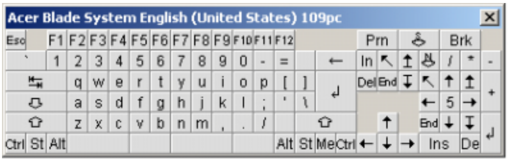
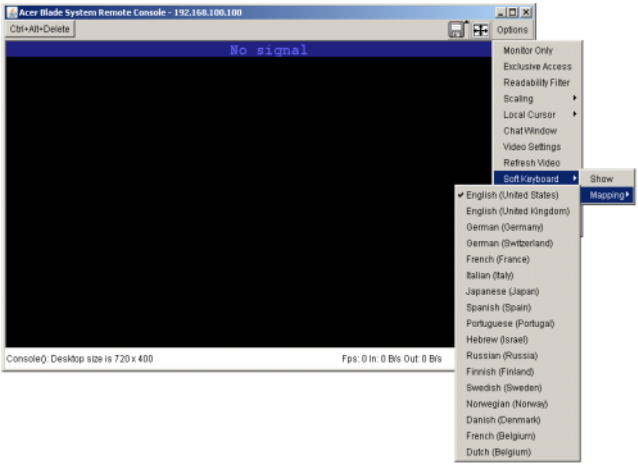

Acer Blade System English (United States) 109pc
Esc F1 F2 F3 F4 F5 F6 F7 F8 F9 F10 F11 F12 Prn Brk
` 1 2 3 4 5 6 7 8 9 0 - = In / * -
q w e r t y u i o p [ ] Del End
a s d f g h j k l ; ' \ 5
z x c v b n m , . / End
Ctrl St Alt Alt St Me Ctrl Ins De

Figure 2-45. Soft Keyboard Language Selection


Acer Blade System Remote Console - 192.168.100.100
Ctrl+Alt+Delete
Options
No signal
Monitor Only
Exclusive Access
Readability Filter
Scaling
Local Cursor
Chat Window
Video Settings
Refresh Video
Soft Keyboard
Show
Mapping
✓ English (United States)
English (United Kingdom)
German (Germany)
German (Switzerland)
French (France)
Italian (Italy)
Japanese (Japan)
Spanish (Spain)
Portuguese (Portugal)
Hebrew (Israel)
Russian (Russia)
Finnish (Finland)
Swedish (Sweden)
Norwegian (Norway)
Danish (Denmark)
French (Belgium)
Dutch (Belgium)
Console0: Desktop size is 720 x 400
Fps: 0 In: 0 B/s Out: 0 B/s

Local Keyboard

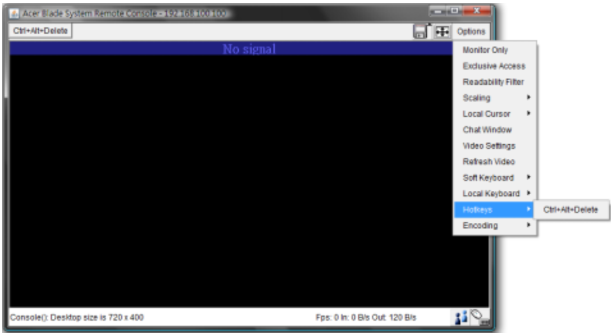
This item allows the user to manually change the local keyboard setting for interaction with a remote host. Use this function to change the language mapping of your browser machine running the remote console host. After you have clicked LOCAL KEYBOARD button, a language submenu displays. When this language list displays, select the language you want to use.

Hotkeys

This item allows the user to select a pre-defined hot key from a list. Once a hot key is selected, the command associated with the hot key will be sent to the remote console host for execution.

After you've clicked the HOTKEY button, the submenu displays as shown in Figure 2-46.

Figure 2-46. Hotkeys


Acer Blade System Remote Console - 192.168.100.100
Ctrl+Alt+Delete
Options
No signal
Monitor Only
Exclusive Access
Readability Filter
Scaling
Local Cursor
Chat Window
Video Settings
Refresh Video
Soft Keyboard
Local Keyboard
Hotkeys
Ctrl+Alt+Delete
Encoding

Console(): Desktop size is 720 x 400

Fps: 0 In: 0 B/s Out: 120 B/s

Encoding

This item allows the user to set the video bandwidth and video quality parameters.

Power Supply Modules

The AB7000 enclosure supports up to four 2500W power supply modules.

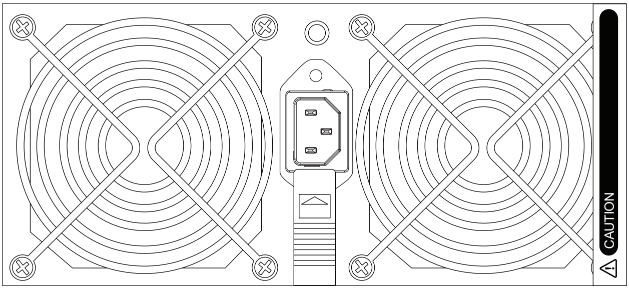
An LED on the back of a power supply will be amber when AC power is present and green when the power is on.

The 2500W power supply modules require a 200-240V AC input and a C20 socket, which requires a power cord with a C19 connector (see "Power Cord" below for details).

Acer's high-efficiency blade system power supplies deliver continuous redundant power at 94%+ peak efficiency. Each power supply module includes a management module that monitors the power supplies and the power enclosure.

The features of these power supplies are shown in the following table.

Figure 2-47. 2500 Power Supply



Feature	Description
Output	2500W
Type	Redundant Module (3+1)
+12V	208A
5VSB	16A
PFC	Yes
Peak Efficiency	94%

Feature	Description
Input AC Range	200-240VAC
Operating Conditions	Temp: -5 to 50 C Humidity: 5 to 95% RH
Fan Type	4x 90mm fans - PFB0912DE-9E69 (8000 RPM) - QFR0912UHE-9E70 (8800 RPM)

Power Supply Failure

If a power supply or a fan in a power supply fails, the system management software will notify you of the situation. In either case, you will need to replace the power supply module with another identical one.

Installing a Power Supply

1. Insert a replacement unit into the empty power bay with the handle to the left.

   Warning! This left/right orientation depends on the power supply's top or bottom location. If you inadvertently put a power supply upside down in the lower slots, it can be VERY difficult to remove the power supply.

2. Push unit all the way in until it is firmly seated.
3. Push the handle back into the closed position until it clicks into the locked position.
4. Move the locking clip away from the socket and reconnect the power cord.

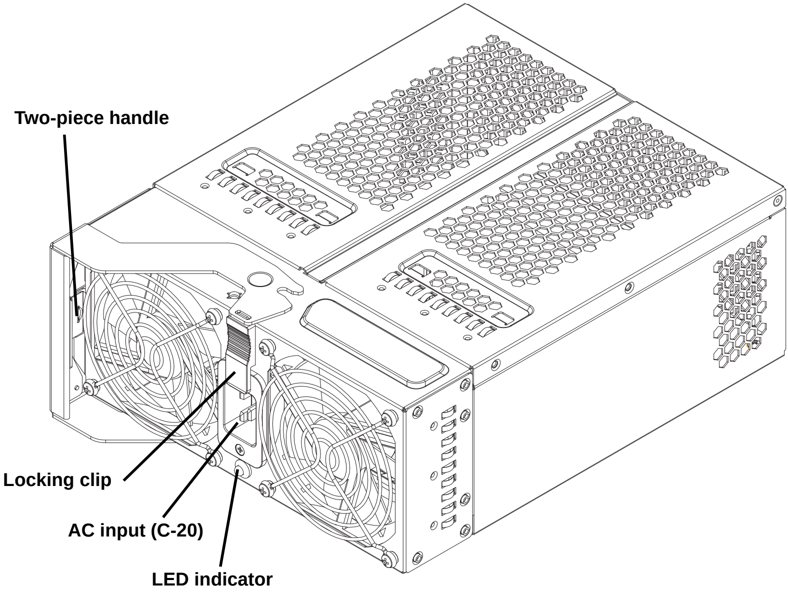
Removing a Power Supply

First, make sure the power supply has been shut down. You can remove power from a power unit via your system management software.

1 Remove the power cord from the power supply unit.

2 Release the locking clip to unlock the power supply module (see Figure 2-48).

Figure 2-48. Power Supply Module



3 Pull out the handle and remove the unit: the two-piece handle locks into the closed position. To release the handle, squeeze together the two metal plates of the handle with your thumb and fingers and then pull out.

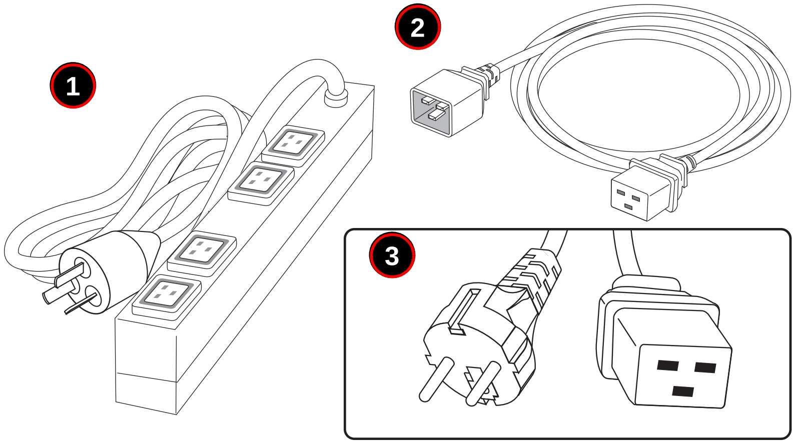
Power Supply Fans

Each power supply unit has four rear fans. These fans are not hot-swappable. If one fails, the power supply will continue to operate but you should replace the power supply unit at the earliest opportunity. If two or more fans fail, the power supply unit will shut down and the LED on the back will turn amber.

Power Components

Power components for the AB7000 system's power supplies are shown below in Figure 2-49 and described in the following table.

Figure 2-49. Power Components



Item	Name	Description
1	PDU	Power Distribution Unit (NEMA L6 Plug)
2	Power Cord	Extension Cord (connection from power supply module to PDU)
3	AC ower P Cord	Connection from power supply module to socket.

Note: You can choose either a PDU with extension cord or an AC power cord for your blade system. Please consult your sales representative regarding your most suitable solution.

Power Cord

Each 2500W power supply module has its own power cord with a C19 type connector (IEC-60320-C19) to connect to the power supply. The power cord connects to a C20 type socket (IEC-60320-C20) for AC power on the power supply module.

See Figure 2-49 for an example of a power cord.

The plastic locking clip that partially covers the socket was designed to prevent the power supply module from being removed with the power cord still connected.

Power Cord Tie and Clamp

A cable tie and clamp are available for all blade power supply models. Using the cable tie, in conjunction with the cable clamp and a small screw, allows you to secure the power cord to the power supply unit. This avoids it loosening and falling off the power supply due to any system vibration during its operation.

Figure 2-50 below provides an illustration of the tie and clamps with a power supply cord and power supply.

Figure 2-50. Power Cord Tie and Clamp Parts

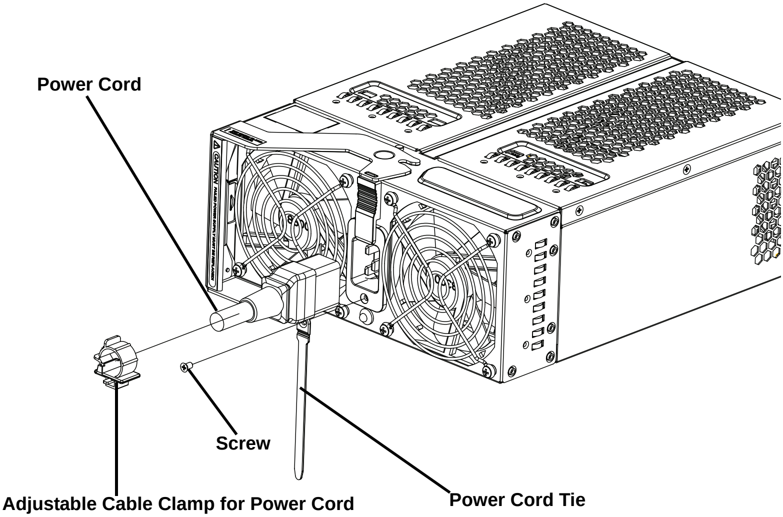
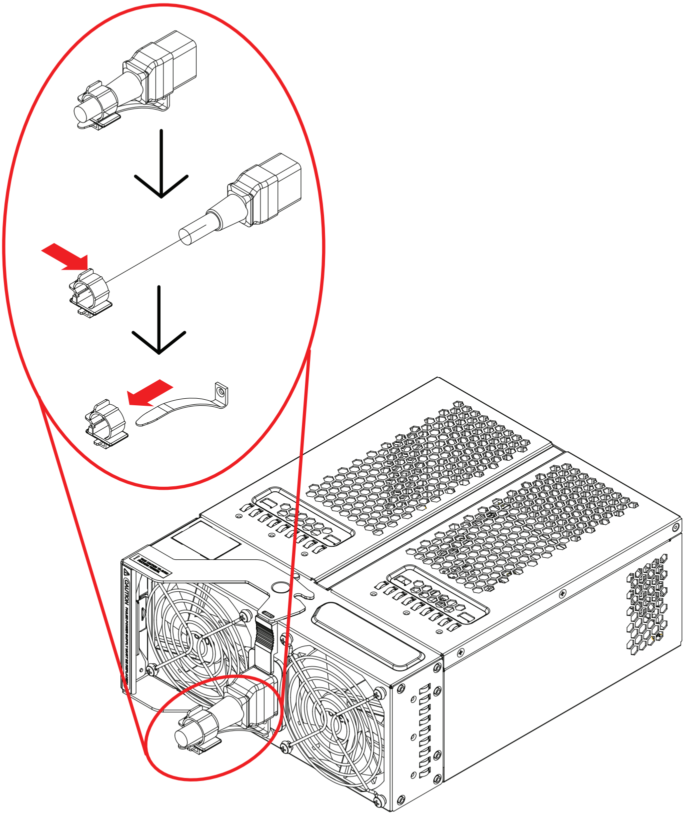


Figure 2-51 shows how to assemble the cable tie and clamp on the power cord. Simply place the clamp around the power cord and attach the cable tie to both the clamp and the power supply using a screw.

This will secure the power cord to the power supply and keep it from dislodging during operation.

Figure 2-51. Power Cord Tie and Clamp Assembly



Double-Wide Modules

Most modules in the AB7000 fit into single-wide bays. The InfiniBand module and some other modules however (such as the 10GbE module), require a double-wide bay and can only be installed in such a bay created by combining the two right most bays. The enclosure's module bays are designed to be easily modified from single to double-wide by following the procedures below.

Setting up a Double-Wide Bay

Modifying an Enclosure’s Module Bays for Double-wide Modules

1. Remove the four screws that secure the inner enclosure to the main enclosure. Slide the inner enclosure outward, depressing the locking tabs on both sides to pull it completely out.
2. Remove any single-wide modules that are occupying the bays you wish to modify to a double-wide bay.
3. In the module bay you wish to expand to double wide, remove the two screws that secure the center support to the inner enclosure then take out the center support. See Figure 2-53, Step 1 for details.
4. Remove the two screws from the underside of each of the two horizontal spacer (as shown in Figure 2-52). See Figure 2-53, Step 2 for details.
5. Using four screws, install the long horizontal spacer to the same space where the two short spacer werse removed. See Figure 2-54, Step 3 for details.
6. You can now install a double-wide module into the bay. See Figure 2-54, Step 4 for details.

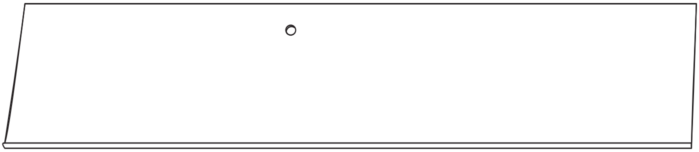
Note: This procedure describes modifying two right most single-wide bays located at the top of the inner enclosure. The same procedure applies to the two right most single bays located at the bottom of the enclosure, but note that the horizontal spacer in the bottom bays use a guide pin and are not interchangeable with the upper bay spacers (see Figure 2-52 for details).

Modules in the upper left hand bays will have their release handles on the bottom, while all modules in the lower bays will have their release handles on the top.

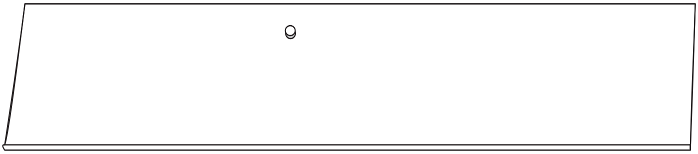
Placing modules in an “upside-down” orientation in the upper-left corner (only) does not affect their operation.

If using the single-port InfiniBand mezzanine card, the InfiniBand switch *MUST* be installed in the bottom location.

Figure 2-52. Horizontal Spacers for Single Bays

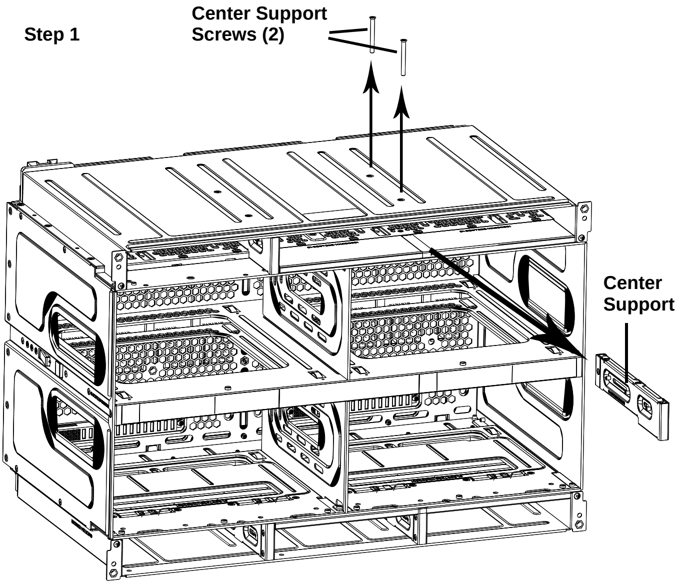


(for top bay)



(for bottom bay)

Figure 2-53. Modifying for a Double-Wide Module Bay (Steps 1 & 2)


Step 1
Center Support
Screws (2)
Center
Support

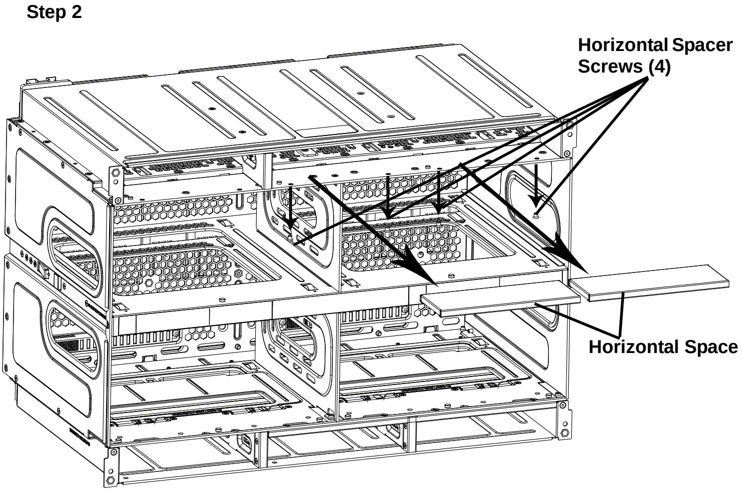
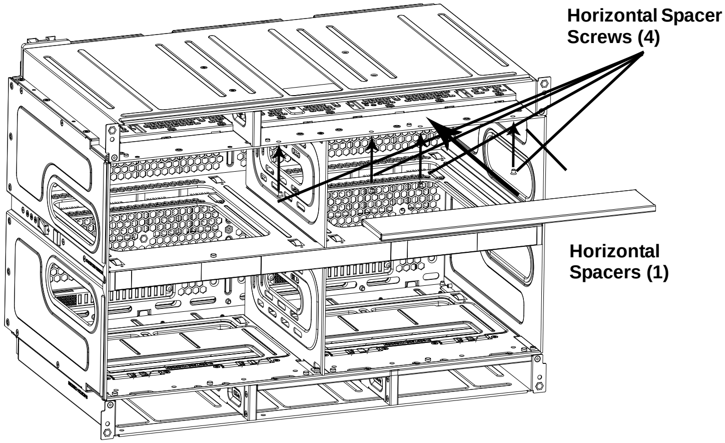
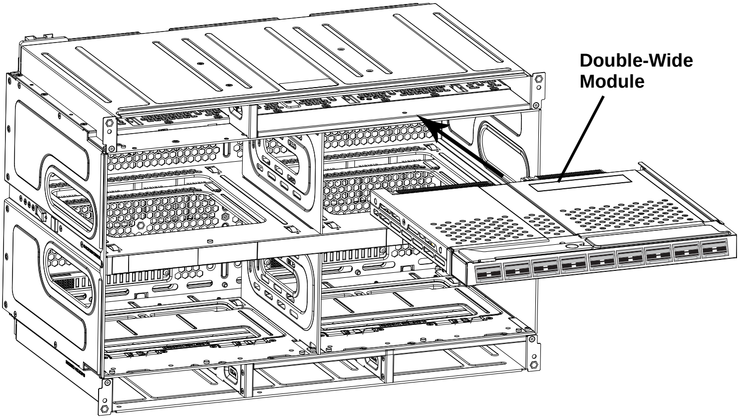

Step 2
Horizontal Spacer
Screws (4)
Horizontal Space

Figure 2-54. Modifying for a Double-Wide Module Bay (Step 3 & 4)

Step 3


Horizontal Spacer Screws (4)
Horizontal Spacers (1)

Step 4


Double-Wide Module

3 Server Blades: Setup and Installation

Overview

This chapter covers the setup and installation of the blade module and its components.

Installing Blade Modules

Up to ten blade modules may be installed into a single blade enclosure. Blade modules with Windows and Linux operating systems may be mixed together in the same blade enclosure.

Powering Up a Blade Unit

Each blade unit may be powered on and off independently from the rest of the blades installed in the same enclosure. A blade unit may be powered up in two ways:

- Press the power button on the blade unit.
- Use Acer Smart Blade Manager or the Acer Smart Blade Console to apply power using either a CMM module, or by the use of the onboard BMC chip in the blade module.

Powering Down a Blade Unit

A blade unit may be powered down in any of three ways:

- Press the power button on the blade unit.
- Use Acer Smart Blade Manager or the Acer Smart Blade Console to power down (if you have Operator or Admin privileges on the CMM).
- Use Acer Smart Blade Manager or a browser connected to the onboard BMC chip attached to the blade to power down.

Removing a Blade Unit from the Enclosure

Although the blade system may continue to run, individual blades should always be powered down before removing them from the enclosure.

Removing a Blade Unit from the Enclosure

1. Power down the blade unit (see "Powering Down a Blade Unit" above).
2. Squeeze both handles to depress the red sections then pull out both handles completely and use them to pull the blade unit from the enclosure.

Note: Blade Modules can be Hot-Plugged from the enclosure.

Removing/Replacing the Blade Cover

The blade cover must be removed to access the mainboard when you need to install or remove processors, memory units, the onboard battery and so on.

Removing/Replacing the Blade Cover

1. Remove the blade unit from the enclosure (see "Removing a Blade Unit from the Enclosure" above).
2. Depress the two buttons on the cover while pushing the cover toward the rear of the blade unit. When it stops, lift the cover off the blade unit.
3. To replace the cover, fit the six grooves in the cover into the studs in the sides of the blade, then slide the cover toward the front of the blade to lock it into place.

Installing a Blade Unit into the Enclosure

Make sure the cover of the blade unit has been replaced first before installing a blade unit in the enclosure.

Installing a Blade Unit into the Enclosure

1. Slowly push the blade unit into its bay with the handles fully pulled out (see Figure 3-55).
2. When the blade stops, push the handles back in to their locked position, making sure the notches in both handles catch the lip of the enclosure (see Figure 3-56).

Note: Blade Modules can be Hot-Plugged into the enclosure.

Warning! Use extreme caution when inserting a blade module into the enclosure. If the blade's power connector becomes damaged, it can damage pins on other blade bays that it is inserted into.

Figure 3-55. Inserting a Blade into the Enclosure

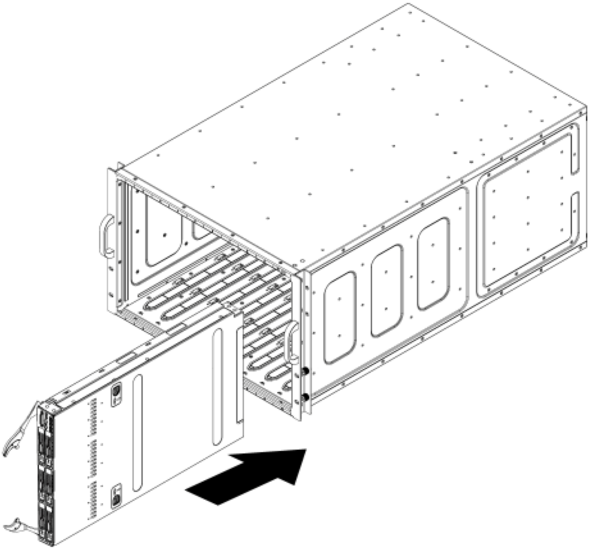
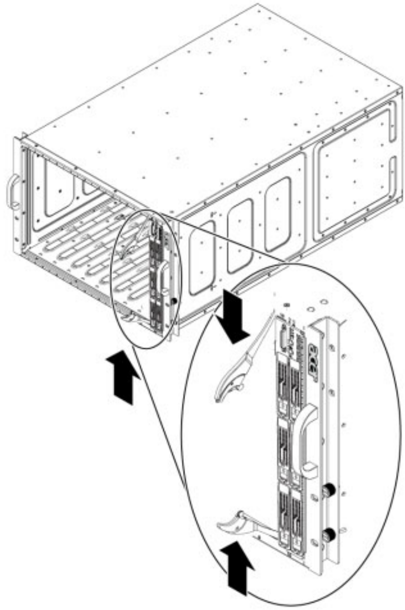


Figure 3-56. Locking the Blade into Position



Processor Installation

Up to four processors may be installed to the mainboard of each blade unit. See “AB460 F1” on page 147 or “AB2x280 F1” on page 203 for general information on the features of the blade units.

Warning! These procedures should only be performed by a trained service technician. Allow the processor heatsink to cool before removing it.

Removing a Processor

1. Power down and remove the blade unit from the enclosure (see Section : Installing Blade Modules on page 92 for details).
2. Remove the cover of the blade unit (see "Removing/Replacing the Blade Cover" on page 93).

3. Loosen the two or four screws (depending on blade type) that secure the heatsink to the mainboard.
4. Remove the heatsink by *gently* rotating it back-and-forth sideways with your fingers to release it from the processor. Set the heatsink aside and upside-down so that nothing comes into contact with the thermal grease on its underside.
5. Raise the lever of the processor socket up until the processor is released from the socket, then lift the silver cover plate and remove the processor.

Warning! This action should only be performed by a trained service technician.

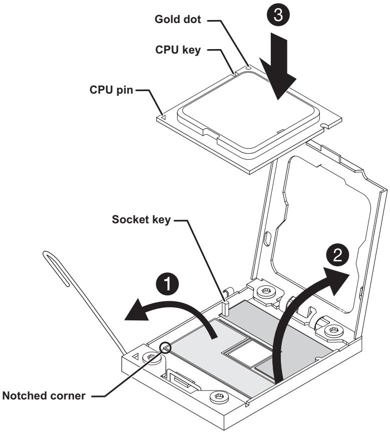
Installing a Processor

1. If present, remove the protective black PnP cap from the processor socket.
2. Raise the lever of the processor socket until it reaches its upper limit (Step 1 below).
3. Lift the silver cover plate completely up and out of the way (Step 2 below).

Note: Be careful not to damage the pins protruding from the CPU socket.

4. Align pin 1 of the processor with pin 1 of the socket (both are marked with a small gold triangle) and gently seat the processor into the socket (Step 3 below).
5. Check to make sure the processor is flush to the socket and fully seated.

Figure 3-57. Instaling a CPU



6. Lower the socket lever until it locks.
7. To install the heatsink, apply thermal grease to the top of the processor. (If reinstalling a heatsink, first clean off the old thermal grease with a clean, lint-free cloth.)
8. Place the heatsink on the processor then tighten two diagonal screws until snug, then the other two screws.
9. When all four screws are snug, tighten them all to secure the heatsink to the mainboard.

Note: Do not overtighten the screws as this may damage the processor or the heatsink.

10. Replace the cover on the blade unit and finish by installing the unit back into the blade enclosure.

DIMM Installation

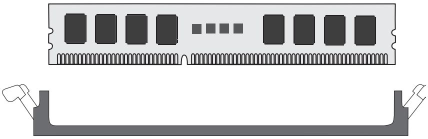
Warning! Exercise extreme care when installing or removing DIMM modules to prevent any possible damage.

Installing DIMM Memory Modules

1. Power down the blade module (see "Powering Down a Blade Unit" on page 92).
2. Remove the blade from the enclosure and the cover from the blade (see "Removing/Replacing the Blade Cover" on page 93).
3. Insert each DIMM vertically into its slot, starting with slots 1A and 2A. Pay attention to the notch along the bottom of the module to prevent inserting the DIMM incorrectly (see Figure 3-58).

Figure 3-58. Installing a DIMM into a Memory Slot

To Install: Insert module vertically and press down until it snaps into place. Pay attention to the bottom notch.



To Remove: Use your thumbs to gently push each release tab outward to free the DIMM from the slot.

4. Gently press down on the DIMM until it snaps into place in the slot. Repeat for all modules. Refer to the DIMM population rules for each blade before installing.
5. Replace the air shroud and the blade cover and install the blade module back into the enclosure.
6. Power up the blade unit (see "Powering Up a Blade Unit" on page 92).

Hard Disk Drive Installation

Hard disk drives are installed in "carriers" which are hot-swappable and can be removed or replaced without powering down the blade unit they reside in. A blade module needs a hard disk drive with an operating system installed to operate.

Warning! To maintain proper airflow, all hard drive bays must have drive carriers or dummies inserted during operation.

To remove a hard drive carrier, do the following:

Removing a Hard Drive Carrier

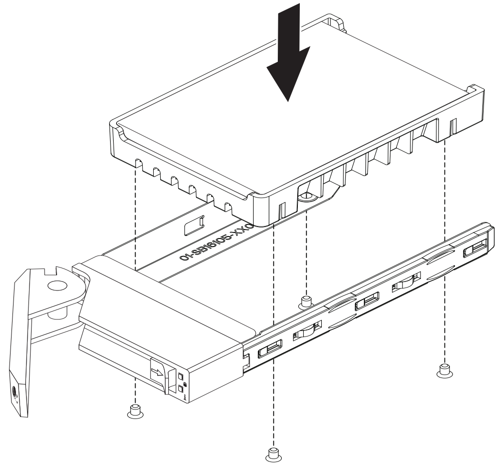
1. Locate the colored “Open” button at the bottom of the drive carrier and press it with your thumb. This action releases the drive carrier from the drive bay.
2. Pull the release handle out about 45-degrees, then use it to pull the drive carrier out.

To Install a hard drive, use the following procedure:

Installing a Hard Drive

1. Remove a blank drive carrier from the blade (see removal procedure above).
2. Insert a drive into the carrier with the PCB side facing down and the connector end toward the rear of the carrier.
3. Align the drive in the carrier so that the screw holes of both line up. Note that there are holes in the carrier marked “SAS/SATA” to aid in correct installation.
4. Secure the drive to the carrier with four screws as shown in Figure3-59: "Installing a Hard Drive in a Carrier"on page100.
5. Insert the drive carrier into its slot keeping the Open button at the bottom. When the carrier reaches the rear of the bay the release handle will retract.
6. Push the handle in until you hear the carrier click into its locked position.

Figure 3-59. Installing a Hard Drive in a Carrier



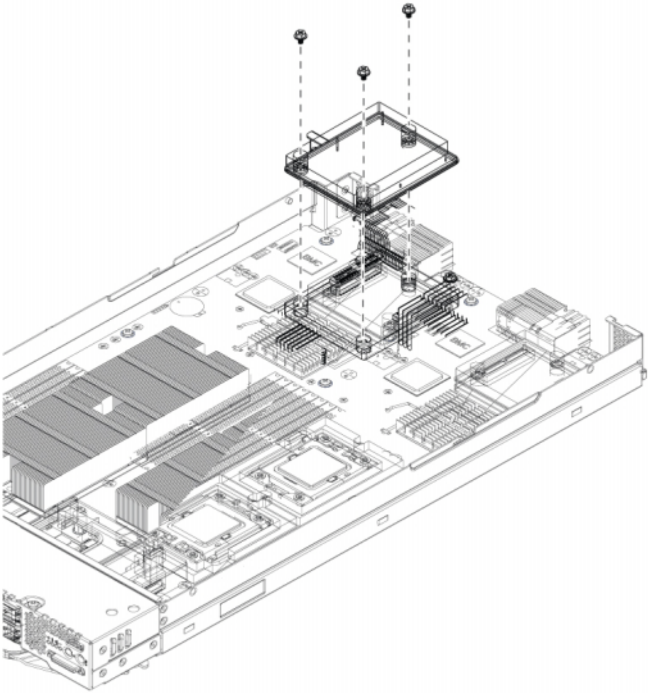
Infiniband mezzanine card installation

All models of the Mezzanine HCA card are compatible with both blade modules.

Card installation

1. Confirm that you have the correct card and three (3) screws.
2. Following the instructions, remove the blade module and open the cover to access the mainboard.
3. In a standard, electro-magnetically protected workstation, secure the card to the serverboard by gently but firmly attaching the card to the two connectors.
4. Using a Phillips screw driver, secure and tighten each screw one at a time. Do not overtighten the screws.

Figure 3-60. Card Installation



Installing the Operating System

An operating system (OS) must be installed on each blade module. Blades with Microsoft Windows OS and blades with Linux OS can both occupy and operate within the same blade enclosure.

There are several methods of installing an OS to the blade modules.

Installing with an External USB CD-ROM Drive

The most common method of installing the OS is with an external USB CD-ROM drive. Take the following steps to install the OS to a blade module:

Note: Installing the OS from an external CD-ROM drive may take several hours to complete.

1. Connect a KVM cable to the KVM connector on the front of the blade module. You will then need to attach a USB hub to the USB port on this cable to provide multiple USB ports.
2. Connect the external CD-ROM drive, a USB keyboard and a mouse to the USB hub. You will also need to connect a monitor to the video connector on the SUV cable. Turn on the blade module.
3. Insert the CD containing the OS into the CD-ROM drive.
4. Follow the prompts to begin the installation.

Installing via PXE Boot

PXE (Preboot Execution Environment) is used to boot a computer over a network. To install the OS via PXE, the following conditions must be met:

1. The PXE BOOT option in BIOS must be enabled.
2. A PXE server has been configured (this can be another blade in the system).
3. The PXE server must be connected over a network to the blade to be booted.

4. The blade has only non-partitioned/unformatted hard drives installed and no bootable devices attached to it.

Once these conditions are met, make sure the PXE server is running. Then turn on the blade on which you wish to boot and/or install the OS. The BIOS in the blade will look at all bootable devices and finding none will connect to the PXE server to begin the boot/install.

Installing via Virtual Media

You can install the OS via Media Redirection through either the Acer Smart Blade Manager or the Acer Smart Blade Console. With this method, the OS is installed from an ISO image that resides on another system/blade.

Refer to “Acer Smart Blade Console” on page 28 and “Acer Smart Blade Manager” on page 554 in this manual.

Acer Smart Console

Server Blade Unit management may be performed with the Smart Console. The Smart Console residing in each server blade can be accessed via the Acer Smart Blade Console or Acer Smart Blade Manager. This is designed to provide an administrator with a comprehensive set of functions and monitored data to keep tabs on the server blade and perform management activities.

- Provides remote Hardware Health Monitoring via IPMI. Key features include the following:
  - Temperature monitoring
  - Fan speed monitoring
  - Voltage monitoring
  - Power status monitoring, chassis intrusion monitoring
  - Remote power control to power-on, power-off or reboot a system
  - Remote access to text-based, graphic-based system information, including BIOS configurations and OS operation information (KVM)
  - Remote management of utility/software applications
- Provides Network Management Security via remote access/console redirection.
  Key features include:
  - User authentication enhancement
  - Encryption support enhancement, allowing for password configuration security to protect sensitive data transferring via Serial over LAN
- Supports the following Management tools: Acer Smart Blade Manager, CLI (Command Line Interface)
- RMCP+ protocol supported

Configuring BMC the IPMI Settings

With the BMC Controller chip built into the server blade unit allows the user to access, monitor, manage and interface with systems in remote locations. This section provides detailed information on how to configure the IPMI settings.

Configuring the IP/MAC Addresses

Note: The DHCP (Dynamic Host Configuration Protocol) is on by default. To change the manufacturer default setting, please use the Acer Smart Blade Manager or the BIOS firmware.

Using the BIOS Settings to set the IP/MAC Addresses

1. Go to the BIOS by pressing the <Del> key during system boot.
2. Select IPMI from the Advanced Menu.
3. Select LAN Configuration from the IPMI submenu.
4. Click on the item - IP Address Source. Select the option Static and hit <Enter>. The onboard BIOS will automatically set the IP Address, MAC Address, Acer, and Subnet Mask.
5. Once the IP, MAC Addresses, Acer and Subnet Mask are set, click on the item Update LAN Settings. Select Yes and hit <Enter> to update IPMI LAN settings.
6. Go to the Exit menu. Select Save Changes & Exit and hit <Enter> to save changes and exit the BIOS.

Using the Internet Browser

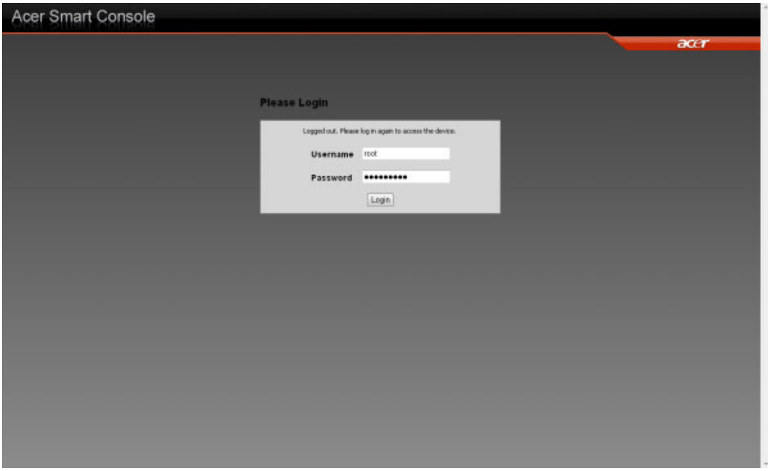
1. Connect a LAN cable to the Ethernet port of the CMM module.
2. Choose a computer that is connected to the same network and open the browser.
3. Enter the IP address of each server that you want to connect to in the address bar in your browser.
4. Once the connection is made, the Log-In screen as shown on the next page will display.

Using IE* to Access the BMC/IPMI Settings from Your Computer

To Log In

Once you are connected to the remote server, the following screen will display.

Figure 3-61. Log In



Logged out. Please log in again to access the device.

Username: root

Password: ••••••••••

1 Enter your Username in the "Username" box.

2 Enter your Password in the "Password" box and click "Login."

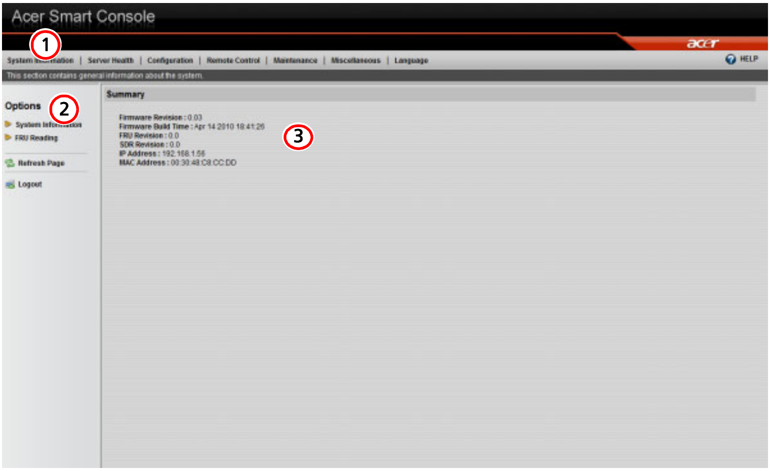
3 The Home Page displays as follows.

Note 1: To use the Acer Smart Blade Manager to access the BMC/IPMI settings, please refer to the“Acer Smart Blade Manager” on page 554.
Note 2: The manufacturer default username and password are root and superuser. Once you have logged into the BMC using the manufacturer default password, be sure to change your password for security purpose.

The IPMI Main Page

Once you are logged in the IPMI utility, the IPMI Main page will display.

Figure 3-62. IPMI Main Page


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
System Information
FRU Reading
Refresh Page
Logout
Summary
1
2
3

This section contains general information about the system.

Firmware Revision : 0.03
Firmware Build Time : Apr 14 2010 18:41:26
FRU Revision : 0.0
SDR Revision : 0.0
IP Address : 192.168.1.56
MAC Address : 00:30:48:C8:CC:DD

The IPMI Main page contains a submenu bar (Top), the Options window (Left), and the main display area (Right)

1 Submenu Bar (Callout #1)

The submenu bar on the top lists the following submenus:

Item	Description
System Information	This submenu displays system information.
Server Health	This submenu displays server health monitoring status.
Configuration	This submenu allows the user to configure the IPMI settings.
Remote Control	This submenu allows the user to launch KVM Console and perform power control & Management.
Maintenance	This submenu allows the user to update firmware and reset the unit.
Miscellaneous	This submenu allows the user to post snooping codes and to launch the SOL console.

Item	Description
Language	This submenu allows the user to select a language setting. (Currently, only English is available.)
? Help	Click this item to find an answer when you have a question.

2 Options window (Callout #2)

The Options window on the left side allows the user to navigate through different options, including the following:

Item	Description
Refresh Page	Click this icon to refresh the page.
Logout	Click this icon to logout from the IPMI utility.

3 The Main Display Area (Callout #3)

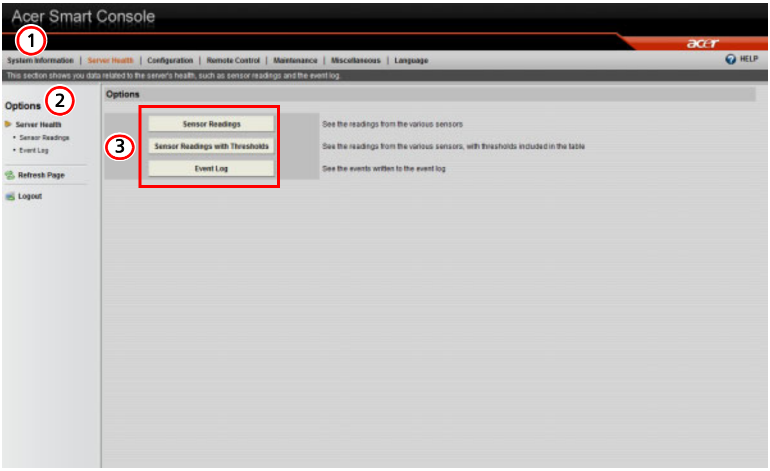
This area displays the items included in a submenu. The items included on the Main page are as follows.

Item	Description
Device Power Status	This item displays the status of the device: On or Off.
Firmware Revision	This item displays the firmware revision#.
Firmware Built Time	This item displays time and date when the firmware was built.

Server Health

This feature allows the user to set Server Health Settings. When you click on the Server Health icon (#1) on the submenu bar, the following screen will display:

Figure 3-63. Server Health


Acer Smart Console
1
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
2
Server Health
Sensor Readings
Event Log
Refresh Page
Logout
Options
3
Sensor Readings
Sensor Readings with Thresholds
Event Log

This section shows you data related to the server's health, such as sensor readings and the event log.

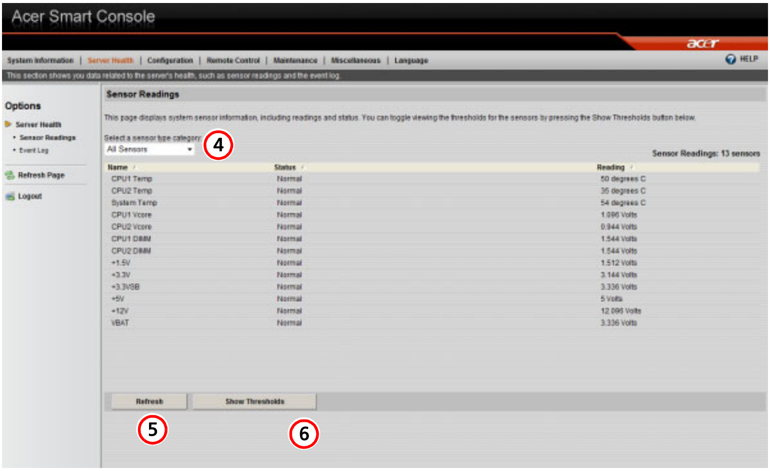
See the readings from the various sensors

See the readings from the various sensors, with thresholds included in the table

See the events written to the event log

The Server Health submenu (#1) contains: Sensor Readings, Sensor Readings with Thresholds, and Event Log. When clicking an item in the Options window on the left (#2), or on the Main Display area (#3), a pop-up menu will appear to display the category of sensor types (#4) as shown in the following figure.

Figure 3-64. Sensor Type Category


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Server Health
Sensor Readings
Event Log
Refresh Page
Logout
All Sensors
Refresh
Show Thresholds
4
5
6

This section shows you data related to the server's health, such as sensor readings and the event log.

Sensor Readings

This page displays system sensor information, including readings and status. You can toggle viewing the thresholds for the sensors by pressing the Show Thresholds button below.

Select a sensor type category:

Sensor Readings: 13 sensors

Name	Status	Reading
CPU1 Temp	Normal	50 degrees C
CPU2 Temp	Normal	35 degrees C
System Temp	Normal	54 degrees C
CPU1 Vcore	Normal	1.096 Volts
CPU2 Vcore	Normal	0.944 Volts
CPU1 DIMM	Normal	1.544 Volts
CPU2 DIMM	Normal	1.544 Volts
+1.5V	Normal	1.512 Volts
+3.3V	Normal	3.144 Volts
+3.3VSB	Normal	3.336 Volts
+5V	Normal	5 Volts
+12V	Normal	12.096 Volts
VBAT	Normal	3.336 Volts

The Categories of Sensor Types (#4)

The Sensor Type Category includes the following:

- All Sensors: This item displays the readings for all sensors
- Temperature Sensors: This item displays the system temperature.
- Voltage Sensors: This item displays the following items: CPU voltage, CPU Core, voltage, DIMM (memory) voltage, +3.3v, +12v, +5V, -12v.

Refresh (#5)

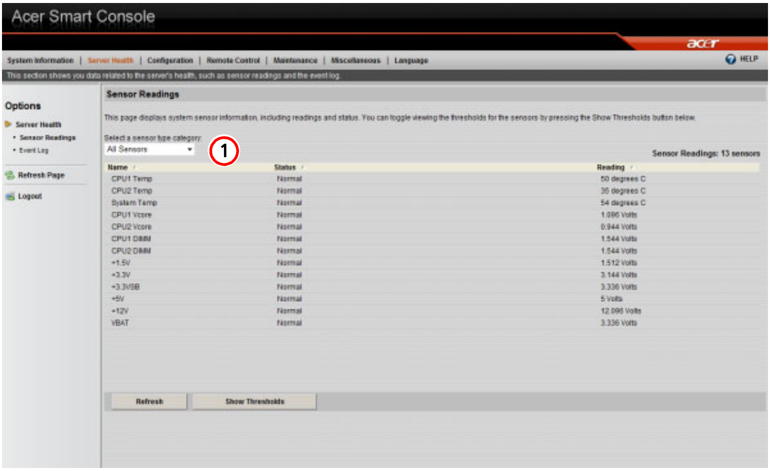
Click on this bottom to refresh this page.

Show Thresholds (#6)

Click on this bottom to display the thresholds of selected sensor-reading items.

Sensor Readings Display-All Sensors

Figure 3-65. All Sensors


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Server Health
Sensor Readings
Event Log
Refresh Page
Logout
Sensor Readings
All Sensors
1
Refresh
Show Thresholds

This section shows you data related to the server's health, such as sensor readings and the event log.

This page displays system sensor information, including readings and status. You can toggle viewing the thresholds for the sensors by pressing the Show Thresholds button below.

Select a sensor type category: All Sensors

Sensor Readings: 13 sensors

Name	Status	Reading
CPU1 Temp	Normal	50 degrees C
CPU2 Temp	Normal	35 degrees C
System Temp	Normal	54 degrees C
CPU1 Vcore	Normal	1.096 Volts
CPU2 Vcore	Normal	0.944 Volts
CPU1 DIMM	Normal	1.544 Volts
CPU2 DIMM	Normal	1.544 Volts
+1.5V	Normal	1.512 Volts
+3.3V	Normal	3.144 Volts
+3.3VSB	Normal	3.336 Volts
+5V	Normal	5 Volts
+12V	Normal	12.096 Volts
VBAT	Normal	3.336 Volts

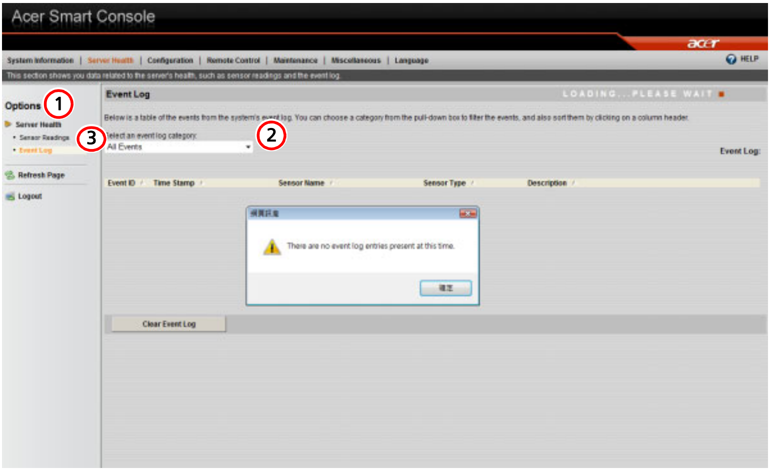
When you select All Sensors (#1) from the Sensor Type Category pop-up submenu, the sensor readings for the following items will be displayed as shown below:

- CPU Temperature: This item displays the status of the CPU temperature.
- System Temperature: This item displays the status of the system temperature.
- CPU Vcore: This item displays the status of the CPU core voltage.
- +3.3V: This item displays the status of the onboard 3.3V power supply.
- DIMM: This item displays the status of DIMM modules.
- +5V: This item displays the status of the onboard +5V power supply.
- +3VSB: This item displays the status of the onboard +3.3VSB power supply.
- -12V: This item displays the status of the onboard -12V power supply.

Event Log

This feature allows the user to configure Event Log settings. When you select Event Log (1) in Options Window and click on the item Event Log Category (2), the following event log categories displays in a pull-down submenu (3) as shown in the following screen.

Figure 3-66. Event Log


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
1
Server Health
Sensor Readings
Event Log
3
2
Refresh Page
Logout
Event Log
LOADING...PLEASE WAIT
Event Log:
Event ID
Time Stamp
Sensor Name
Sensor Type
Description
Clear Event Log

This section shows you data related to the server's health, such as sensor readings and the event log.

Below is a table of the events from the system's event log. You can choose a category from the pull-down box to filter the events, and also sort them by clicking on a column header.

Select an event log category: All Events

There are no event log entries present at this time.

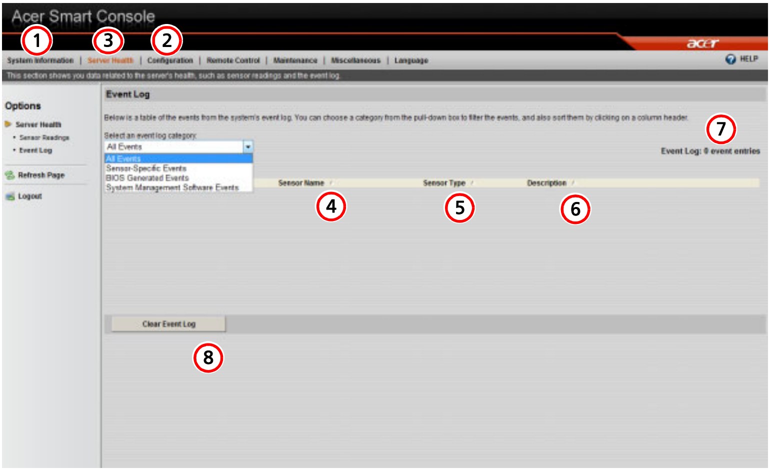
Sensor-Specific Events: This item displays the event log for sensor-specific events.

BIOS-Generated Events: This item displays the event log for BIOS-generated events.

System Management Software Events: This item displays the event log for system management software events.

After you have selected an event log category, a screen will appear to show the status of the event log as shown below.

Figure 3-67. Event Log Status


Acer Smart Console
1
3
2
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Server Health
Sensor Readings
Event Log
Refresh Page
Logout
Event Log
All Events
All Events
Sensor-Specific Events
BIOS Generated Events
System Management Software Events
Sensor Name
Sensor Type
Description
4
5
6
7
Clear Event Log
8

This section shows you data related to the server's health, such as sensor readings and the event log.

Below is a table of the events from the system's event log. You can choose a category from the pull-down box to filter the events, and also sort them by clicking on a column header.

Select an event log category: All Events

Event Log: 0 event entries

4 Sensor Name: This item indicates the name of the sensor (device) to which the event occurred.

5 Sensor Type: This item indicates the type of the event.

6 Description: This item provides a brief description of the event.

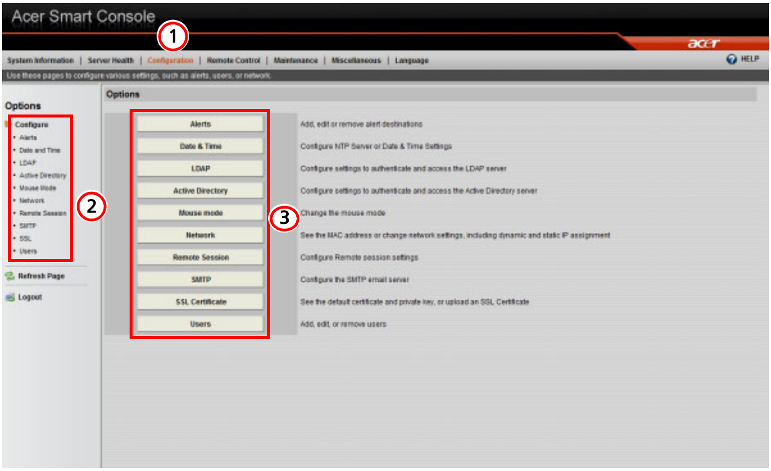
7 Event Log: This item indicates the number of events included on the event log.

8 Clear Event Log: Click the button to clear the event log.

Configuration

This feature allows the user to configure various network settings. When you click on the Configuration icon (#1) on the submenu bar, the following screen will display:

Figure 3-68. Configuration


Acer Smart Console
①
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Configure
Alerts
Date and Time
LDAP
Active Directory
Mouse Mode
Network
Remote Session
SMTP
SSL
Users
②
Refresh Page
Logout
Options
③

Use these pages to configure various settings, such as alerts, users, or network.

Alerts	Add, edit or remove alert destinations
Date & Time	Configure NTP Server or Date & Time Settings
LDAP	Configure settings to authenticate and access the LDAP server
Active Directory	Configure settings to authenticate and access the Active Directory server
Mouse mode	Change the mouse mode
Network	See the MAC address or change network settings, including dynamic and static IP assignment
Remote Session	Configure Remote session settings
SMTP	Configure the SMTP email server
SSL Certificate	See the default certificate and private key, or upload an SSL Certificate
Users	Add, edit, or remove users

The Configuration submenu includes the items shown in the Options window on the left (2) or in the Main Display area on the right (3).

Select an item on the list to configure the settings for the item selected.

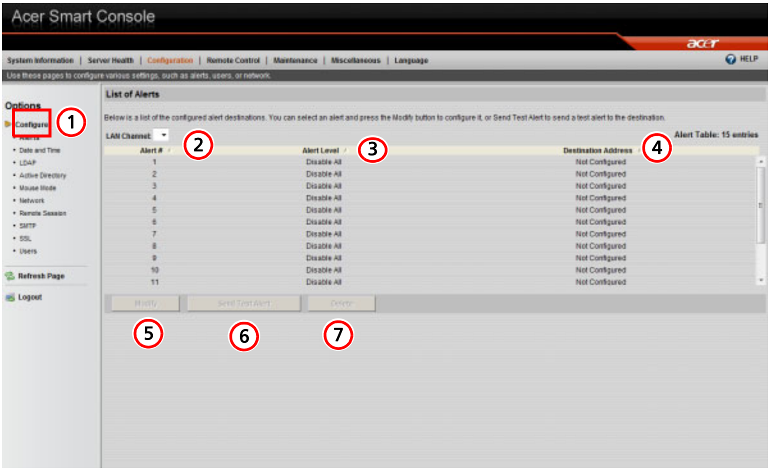
- Alert
- Date & Time
- LDAP
- Active Directory
- Mouse mode
- Network
- Remote Session
- SMTP
- SSL Certificate
- Users

Note: To set up an email alert, please enter the IP address of your mail server in the SMTP (Simple Mail Transfer Protocol.)

Configuration - Alerts

This feature allows the user to configure time and date settings for the host server and client computer. When you click on the Time and Date icon in the Options window (1), the following screen will display.

Figure 3-69. Configuration Alerts


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Configure
Alerts
Date and Time
LDAP
Active Directory
Mouse Mode
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
List of Alerts
LAN Channel:
Modify
Send Test Alert
Delete
1
2
3
4
5
6
7

Use these pages to configure various settings, such as alerts, users, or network.

Below is a list of the configured alert destinations. You can select an alert and press the Modify button to configure it, or Send Test Alert to send a test alert to the destination.

Alert Table: 15 entries

Alert #	Alert Level	Destination Address
1	Disable All	Not Configured
2	Disable All	Not Configured
3	Disable All	Not Configured
4	Disable All	Not Configured
5	Disable All	Not Configured
6	Disable All	Not Configured
7	Disable All	Not Configured
8	Disable All	Not Configured
9	Disable All	Not Configured
10	Disable All	Not Configured
11	Disable All	Not Configured

1 Alerts: Click this item to add, to modify, to delete or to define the setting of an alert.

2 Alert#: This item lists Alert item numbers.

3 Alert Level: This item indicates the alert level for each alert.

4 Destination Address: This item indicates the target address of an alert.

5 Modify: Click on the Modify icon to configure or modify a selected alert.

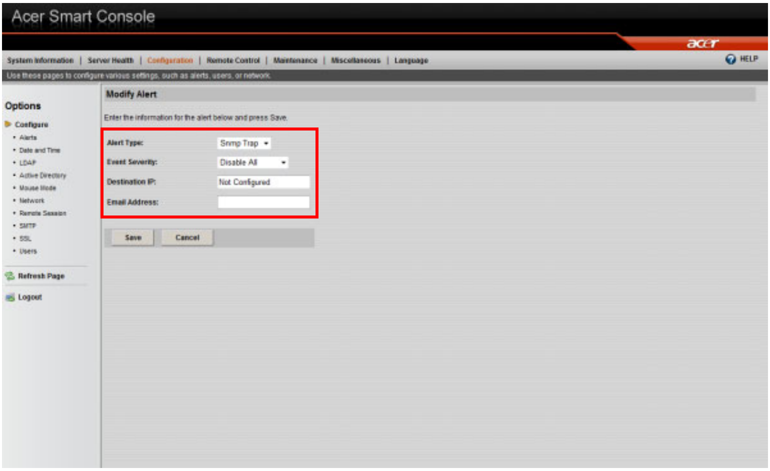
6 Send Test Alert: Click on this icon to send a configured alert to its destination (the target address) for testing.

7 Delete: Click on this icon to delete an alert.

Modifying Alerts

When you select an item (2) and click on Modify (5), the Modify Alert submenu displays as shown below.

Figure 3-70. Modifying Alerts


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Configure
Alerts
Date and Time
LDAP
Active Directory
Mouse Mode
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
Save
Cancel

Use these pages to configure various settings, such as alerts, users, or network.

Modify Alert

Enter the information for the alert below and press Save.

Alert Type:	Snmp Trap
Event Severity:	Disable All
Destination IP:	Not Configured
Email Address:	

To modify an alert, enter the information needed for the following items:

- Alert Type: This item allows you to specify the alert type. You can select Snmp Type or Email from the pop-up menu.
- Event Severity: This item allows you to decide how to classify or label an alert
- according to the seriousness of the alert. You can choose an item from the popup menu to categorize the alert: Disable All, Informational, Warning, Critical or Non-recoverable.
- Destination IP: This item allows you to specify the IP address of the server that you want to send your alert to.
- Email Address: This item allows you to specify the e-mail address that you want to send your alert to.

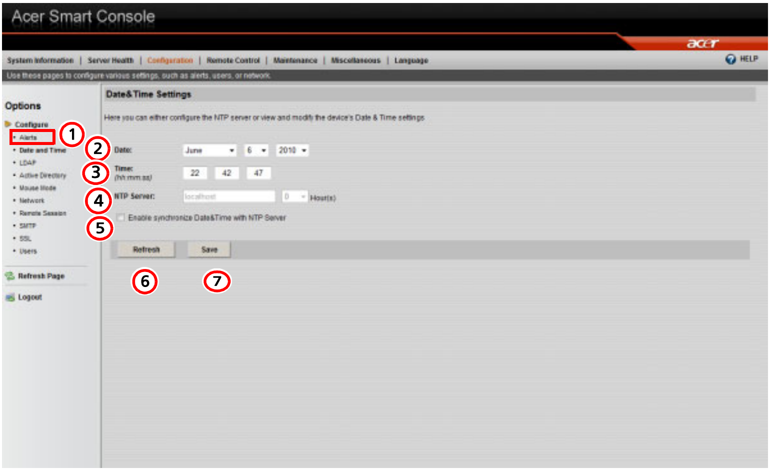
After entering the information in the fields, press <Save> to save the information you've entered or press <Cancel> to cancel it.

Note: To set up an email alert, please enter the IP address of your mail server in the SMTP (Simple Mail Transfer Protocol.)

Configuration - Time and Date Settings

This feature allows the user to configure time and date settings for the host server and client computer. When you click on the Time and Date icon in the Options window (1), the following screen will display.

Figure 3-71. Configuration - Time and Date Settings


Acer Smart Console
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System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Configure
Alerts
Date and Time
LDAP
Active Directory
Mouse Mode
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
Date&Time Settings
Refresh
Save
1
2
3
4
5
6
7

Use these pages to configure various settings, such as alerts, users, or network.

Here you can either configure the NTP server or view and modify the device's Date & Time settings

Date: June 6 2010

Time: (hh:mm:ss) 22 42 47

NTP Server: localhost 0 Hour(s)

☐ Enable synchronize Date&Time with NTP Server

1 Time and Date: Click on this item to configure the Time and Date settings.

2 Date: Enter month, date and year in this row.

3 Time: Enter hour, minute and second in the (hh:mm:ss) format.

4 NTP Server: Enter the name of the NTP server in this field.

5 Enabling Synchronizing: Check this box to enable synchronization of time and date of the client computer with the NTP server.

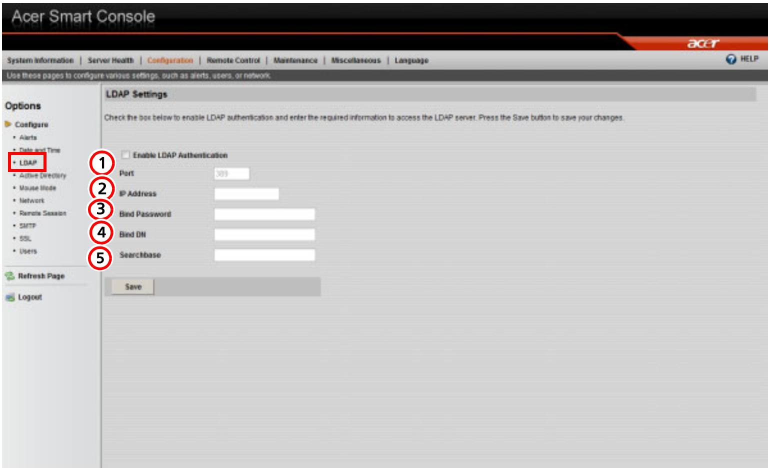
6 Refresh: Click this button to refresh the page.

7 Save: Click on this icon to save any changes done to the Time and Date settings

Configuration - Light-Weight Directory Access Protocol (LDAP) Settings

This feature allows the user to configure Light-Weight Directory Access Protocol (LDPA) settings. When you click on the LDAP icon in the Options window (1), the following screen will display.

Figure 3-72. Light-Weight Directory Access Protocol (LDAP) Settings


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Configure
Alerts
Date and Time
LDAP
Active Directory
Mouse Mode
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
LDAP Settings
1
2
3
4
5
Save

Use these pages to configure various settings, such as alerts, users, or network.

Check the box below to enable LDAP authentication and enter the required information to access the LDAP server. Press the Save button to save your changes.

☐ Enable LDAP Authentication

Port 389

IP Address

Bind Password

Bind DN

Searchbase

Examples and Explanations of the LDAP settings are shown below:

1 Port: 389-This item indicates the LDAP server port number.

2 IP Address: xx.xx.xx.xx- This item indicates the LDAP server IP address

3 Bind Password: Secret- This item indicates the LDAP server password

4 Bind DN: cn=manager, dc=administrator, dc=com-The bind DN is the user or the LDAP server that is permitted to do search in the LDAP directory within a defined search base.

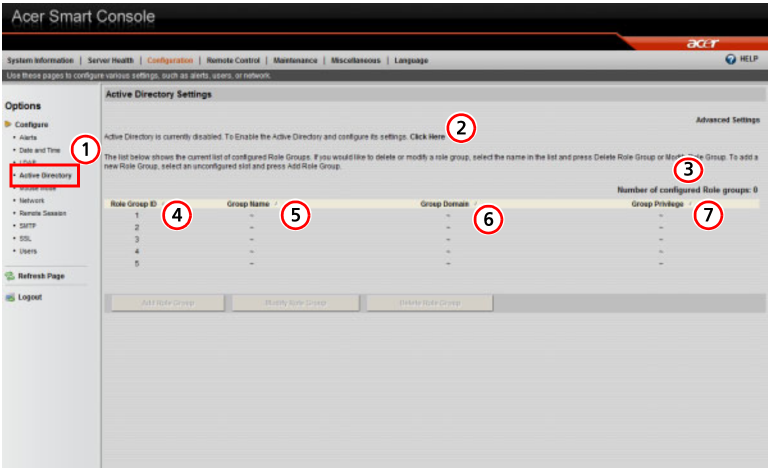
5 SearchBase: dc=administrator, dc=com-The research base shows the client which port in the external directory tree to search.

After entering the information in the fields, click **Save** to save the information you've just entered.

Configuration - Active Directory Settings

This feature allows the user to configure Active Directory settings. When you click on the Active Directory icon in the Options window (1), the following screen will display.

Figure 3-73. Configuration - Active Directory Settings


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
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Date and Time
LDAP
Active Directory
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
Advanced Settings
Add Role Group
Modify Role Group
Delete Role Group
1
2
3
4
5
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7

Use these pages to configure various settings, such as alerts, users, or network.

Active Directory Settings

Active Directory is currently disabled. To Enable the Active Directory and configure its settings. Click Here

The list below shows the current list of configured Role Groups. If you would like to delete or modify a role group, select the name in the list and press Delete Role Group or Modify Role Group. To add a new Role Group, select an unconfigured slot and press Add Role Group.

Number of configured Role groups: 0

Role Group ID	Group Name	Group Domain	Group Privilege
1	-	-	-
2	-	-	-
3	-	-	-
4	-	-	-
5	-	-	-

1 Active Directory: Click on this item to configure Active Directory settings.

2 If Active Directory is currently disabled, click <Here> to enable it.

3 Number of configured Role Group: This item displays the number of configured role groups.

4 Role Group ID: This item displays the role group ID.

5 Group Name: This item displays the name of the role group.

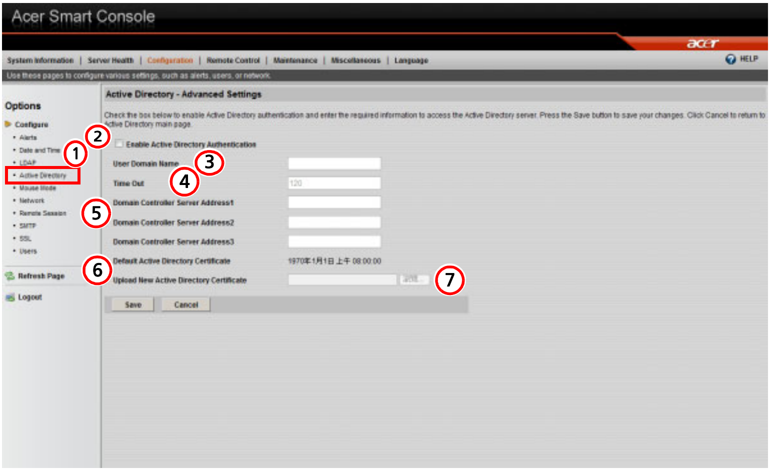
6 Group Domain: This item displays the domain of the role group.

7 Group Privilege: This item displays the user privilege of the role group.

Configuration - Active Directory - Advanced Settings

This feature allows the user to configure Active Directory-Advanced settings. When you click on the Active Directory icon in the Options window (1) and checked the Enable box indicated on the previous page, the following screen will display.

Figure 3-74. Configuration - Active Directory - Advanced Settings


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
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Options
Configure
Alerts
Date and Time
LDAP
Active Directory
Mouse Mode
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
Save
Cancel
1
2
3
4
5
6
7

Use these pages to configure various settings, such as alerts, users, or network.

Active Directory - Advanced Settings

Check the box below to enable Active Directory authentication and enter the required information to access the Active Directory server. Press the Save button to save your changes. Click Cancel to return to Active Directory main page.

☐ Enable Active Directory Authentication

User Domain Name

Time Out 120

Domain Controller Server Address1

Domain Controller Server Address2

Domain Controller Server Address3

Default Active Directory Certificate 1970年1月1日 上午 08:00:00

Upload New Active Directory Certificate

1 Active Directory: Click on this item and check the Enable box on the previous page to configure Active Directory settings.

2 Check the Enable box to enable Active Directory Authentication.

3 User Domain Name: This item allows the user to enter the user domain name.

4 Time Out: This item displays the Time-out settings.

5 Domain Controller Server Addresses 1~3: These items allow the user to enter the IP addresses for the Domain Controller Servers 1~3.

6 Default Active Directory Certificate: This item displays the information of the default active directory certificate.

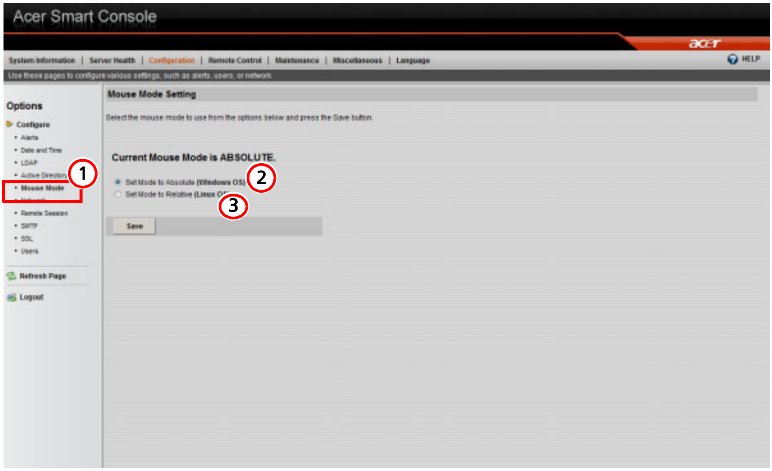
7 Upload New Default Active Directory Certificate: Click <Browse> to select and upload the new default active directory certificate.

After the required information is entered, click <Save> to save the information you've entered or click <Cancel> to cancel it.

Configuration - The Mouse Mode Setting

This feature allows the user to configure mouse mode settings. When you click on the Mouse Mode icon in the Options window (1), the following screen will display.

Figure 3-75. Mouse Mode Settings


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
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Options
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Date and Time
LDAP
Active Directory
Mouse Mode
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
Save
1
2
3

Use these pages to configure various settings, such as alerts, users, or network.

Mouse Mode Setting

Select the mouse mode to use from the options below and press the Save button.

Current Mouse Mode is ABSOLUTE.

● Set Mode to Absolute (Windows OS)
○ Set Mode to Relative (Linux OS)

1 Mouse Mode: Click on this icon to configure the mouse mode setting.

2 Set Mode to Absolute: Check the radio button to use the Absolute mode for the Windows OS. (This is the default setting.)

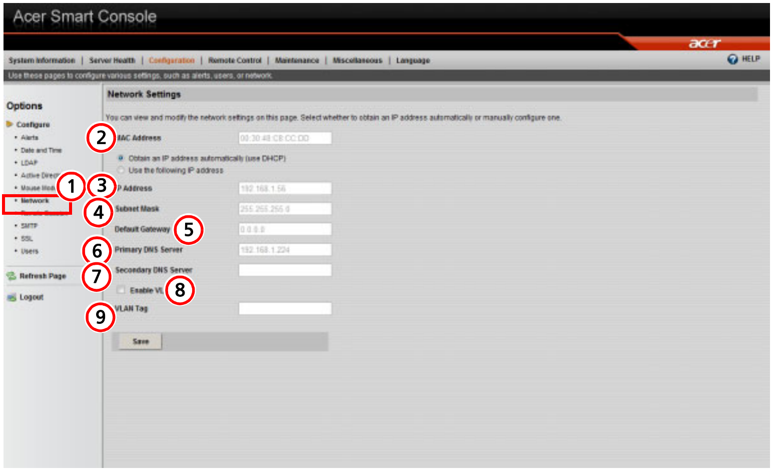
3 Set Mode to Relative: Check the radio button to use the Relative mode for the Linux/Unix OS.

Note: IPMI is an OS-independent platform, and KVM support is an added feature for IPMI. For your mouse to function properly, please configure the Mouse Mode settings (above) according to your OS type.

Configuration - Network Settings

This feature allows you to configure network settings. When you click on the Network icon in the Options window (1), the following screen will display.

Figure 3-76. Network Settings


Acer Smart Console
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Refresh Page
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Use these pages to configure various settings, such as alerts, users, or network.

Network Settings

You can view and modify the network settings on this page. Select whether to obtain an IP address automatically or manually configure one.

AC Address: 00:30:48:C8:CC:DD

● Obtain an IP address automatically (use DHCP)
○ Use the following IP address

P Address: 192.168.1.56
Subnet Mask: 255.255.255.0
Default Gateway: 0.0.0.0
Primary DNS Server: 192.168.1.224
Secondary DNS Server:
☐ Enable VL
VLAN Tag:

1 Network: This item allows you to view or modify network settings.

2 MAC Address: Enter the MAC address for networking in the box. Check the first radio button to obtain an IP address automatically by using DHCP (Dynamic Host Configuration Protocol).
Check the second radio button to use the IP address entered below.

3 IP address: If the second radio button above is checked, please enter your IP address in the box.

4 Subnet Mask: Enter the address for the subnet mask of your network.

5 Default Acer: Enter the IP address for the default gateway of your network.

6 Primary DNS Server: Enter the IP address of your primary domain name server.

7 Secondary DNS Server: Enter the IP address of your secondary domain name server.

8 Enable VLAN: Check this box to enable Virtual LAN support

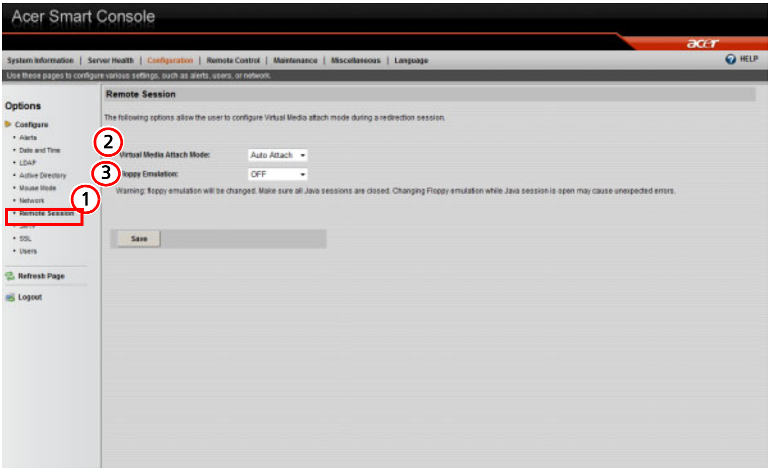
9 VLAN Tag: This item allows you to use VLAN Tagging or Frame Tagging to encapsulate specific data, so it can be transparently transmitted through multiple platforms without information leakage.

After entering the required information in the fields, click <Save> to save the information you have entered.

Configuration - Remote Session

This feature allows the user to configure remote session settings. When clicking on the Remote Session in the Options window (1), the following screen displays.

Figure 3-77. Remote Session


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
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Alerts
Date and Time
LDAP
Active Directory
Mouse Mode
Network
Remote Session
SSL
Users
Refresh Page
Logout
Save
2
3
1

Use these pages to configure various settings, such as alerts, users, or network.

Remote Session

The following options allow the user to configure Virtual Media attach mode during a redirection session.

Virtual Media Attach Mode: Auto Attach

loppy Emulation: OFF

Warning: floppy emulation will be changed. Make sure all Java sessions are closed. Changing Floppy emulation while Java session is open may cause unexpected errors.

Virtual Media Attach Mode (Callout #2): Click the pull-down menu to display the following virtual media attach modes:

- Attach: Select this mode to activate a virtual media in order to make it available for remote access. A virtual device will always be seen in the system BIOS even when it is not active.
- Auto Attach (Default): Select this mode to automatically enable virtual media support and make it available for remote access. Virtual devices will only be shown in the operating systems and BIOS when a device or an ISO image is connected through the virtual media wizard.
- Detach: Select this mode to disable virtual media for remote

access.

Floppy Emulation (Callout #3): Click the pull-down menu to see the following:

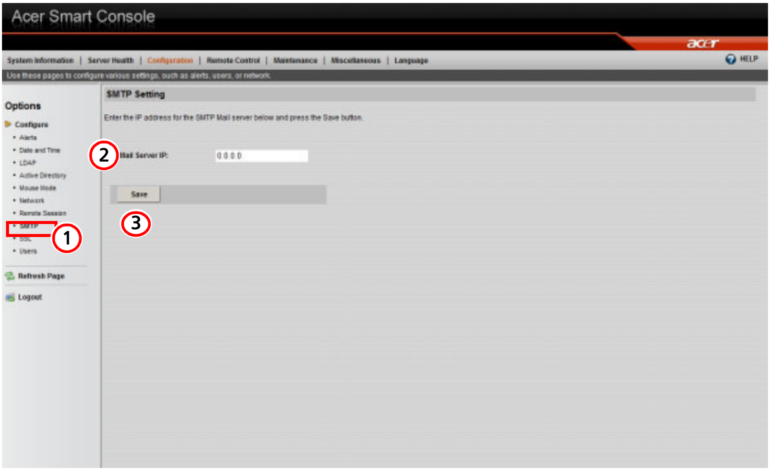
- Off (Default): Select this item to disable floppy emulation when you wish to connect the USB Flash drive via virtual media redirection.
- On: Select this item to enable floppy emulation when you wish to connect a floppy drive or floppy ISO image through virtual media redirection.

Warning! Be sure to close all Java sessions before changing floppy emulation to avoid unexpected errors.

Configuration - SMTP Settings

This feature allows the user to configure SMTP (Simple Mail Transfer Protocol) settings for email transmission through the network. When you click on the SMTP icon in the Options window (1), the following screen will display.

Figure 3-78. SMTP Settings



Acer Smart Console
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System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
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Date and Time
LDAP
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Mouse Mode
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
SMTP Setting
Save
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Use these pages to configure various settings, such as alerts, users, or network.

Enter the IP address for the SMTP Mail server below and press the Save button.

Mail Server IP: 0.0.0.0

1 SMTP: Check this item to configure SMTP (Simple Mail Transfer Protocol) settings for email transmission across the IP network.

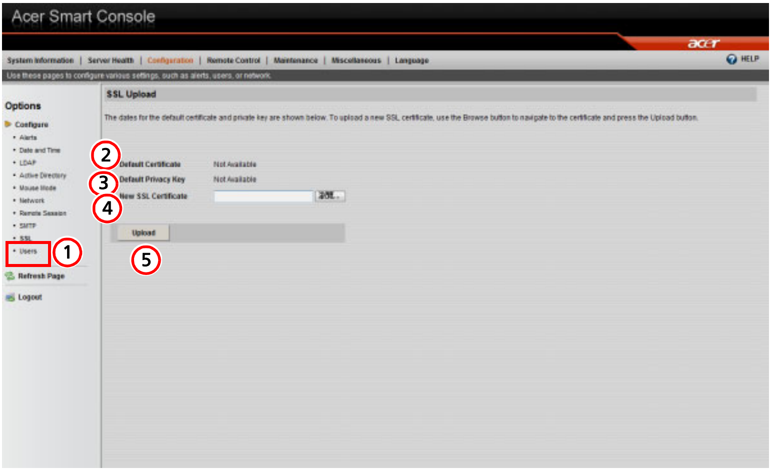
2 Mail Server IP: Enter the SMTP Mail Server IP address for your network in the box.

3 Save: Click on this icon to save any changes to the SMTP setting.

Configuration - SSL Upload Settings

This feature allows the user to configure upload settings for encrypted data totransmit across the internet by using the Secure Sockets Layer (SSL) protocol.When you click on the SSL Upload icon in the Options window (1), the followingscreen will display.

Figure 3-79. SSL Upload Settings


Acer Smart Console
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System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
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LDAP
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Mouse Mode
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
SSL Upload
Upload
1
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3
4
5

Use these pages to configure various settings, such as alerts, users, or network.

The dates for the default certificate and private key are shown below. To upload a new SSL certificate, use the Browse button to navigate to the certificate and press the Upload button.

Default Certificate Not Available

Default Privacy Key Not Available

New SSL Certificate

1 SSL: Check this item to configure SSL Upload settings for the encrypted datato securely transmit through the internet.

2 Default Certificate: This item allows the user to enter the default certificate information. Once entered, it displays the default certificate information.

3 Default Private Key: This item allows the user to enter the default private key information. Once entered, it displays the default private key information.

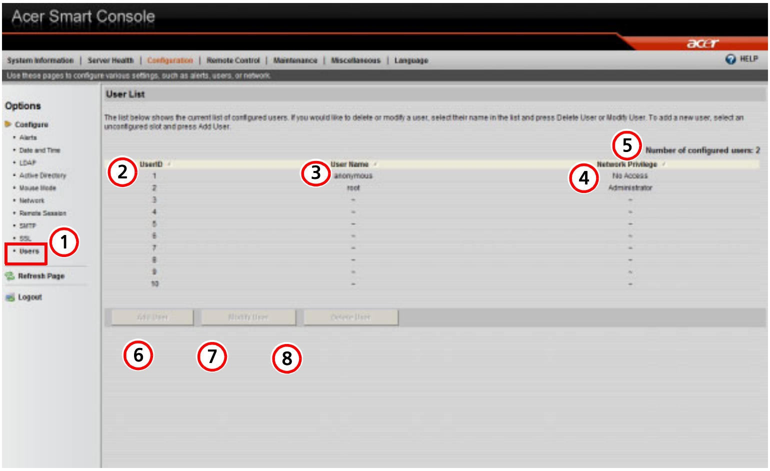
4 New SSL Certificate: This item allows the user to enter the new SSL Certificate information.

5 Upload: Click on this button to upload encrypted data to the network for transmission

Configuration - Users Settings

This feature allows you to change users settings. When you click on the Users icon in the Options window (1), the following screen will display.

Figure 3-80. User Settings


Acer Smart Console
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System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Use these pages to configure various settings, such as alerts, users, or network.
Options
Configure
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Date and Time
LDAP
Active Directory
Mouse Mode
Network
Remote Session
SMTP
SSL
Users
Refresh Page
Logout
User List
Add User
Modify User
Delete User
1
2
3
4
5
6
7
8

The list below shows the current list of configured users. If you would like to delete or modify a user, select their name in the list and press Delete User or Modify User. To add a new user, select an unconfigured slot and press Add User.

Number of configured users: 2

UserID	User Name	Network Privilege
1	anonymous	No Access
2	root	Administrator
3	-	-
4	-	-
5	-	-
6	-	-
7	-	-
8	-	-
9	-	-
10	-	-

1 Users: Select this item to configure the user settings. The current users list is displayed. To delete or to modify a user setting, select the name and press <Delete User> or <Modify User>.

2 UserID: This item displays the ID# of a user.

3 User Name: Use this item to enter and display a user name.

4 Network Privileges: Use this item to set the network access privileges for a user.

- Privileges for an Administrator: An administrator has full power in accessing, controlling and managing the network, including creating accounts for users and changing network configuration settings.
- Privileges for an Operator: An operator has limited access to the network in order to perform tasks that have been pre-assigned or approved by the Administrator. He/she is not allowed to issue commands or modify network settings, for example.

5 Number of configured users: This item displays the number of the users that are set up for the network. The maximum of 16 user profiles can be made.

6 Add User: Click on this icon to add a new user to the network. When prompted, select an empty slot from the users list to add an user.

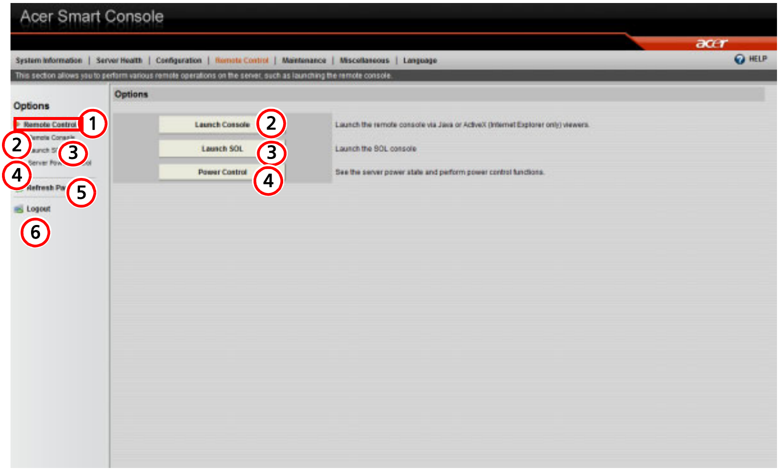
7 Modify User: Click on this icon to modify the information or the status of a user. When prompted, using the arrow keys, select a user from the users list to modify the user information.

8 Delete User: Click on this icon to delete a user from the network. When prompted, using the arrow keys, select a user from the users list to delete it from the list.

Remote Control - the Main Menu

This section allows the user to carry out activities and perform operations on a remote server via remote access.

Figure 3-81. Main Menu



Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Remote Control
Remote Console
Launch SOL
Server Power Control
Refresh Page
Logout
Options
Launch Console
Launch SOL
Power Control
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4

This section allows you to perform various remote operations on the server, such as launching the remote console.

Launch the remote console via Java or ActiveX (Internet Explorer only) viewers.

Launch the SOL console

See the server power state and perform power control functions.

The Remote Access Main Menu includes the following items:

1 Remote Control: Click on this icon to configure Remote Control settings.

2 (Launch) Remote Console: Click this button to launch Remote Console.

3 (Launch) SOL: Click this button to enable Serial_Over_LAN support.

4 (Server) Power Control: Click this button to display server power state and to configure server power settings.

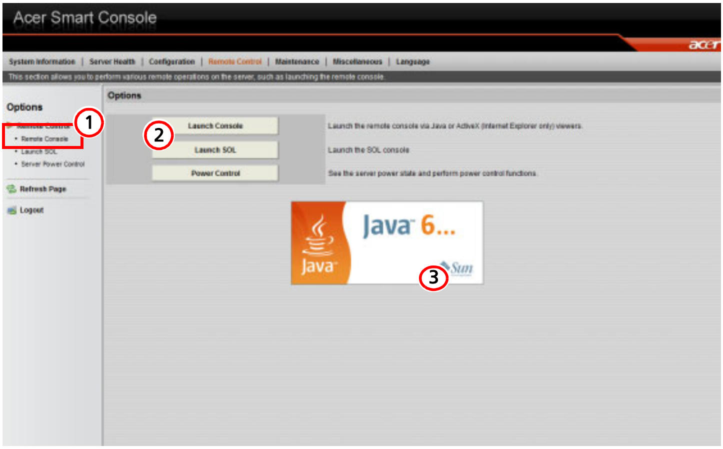
5 Refresh: Click this button to refresh the page.

6 LogOut: Click this button to log out from the remote console.

Remote Console

This feature allows you to perform various activities on the server. When you click on the Remote Console icon in the Options window (1) to activate Remote Console settings, the following screen will display.

Figure 3-82. Remote Console



This section allows you to perform various remote operations on the server, such as launching the remote console.

Launch the remote console via Java or ActiveX (Internet Explorer only) viewers.

Launch the SOL console

See the server power state and perform power control functions.

Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
Options
Remote Control
Remote Console
Launch SOL
Server Power Control
Refresh Page
Logout
Options
Launch Console
Launch SOL
Power Control
Java 6...
Java
Sun
1
2
3

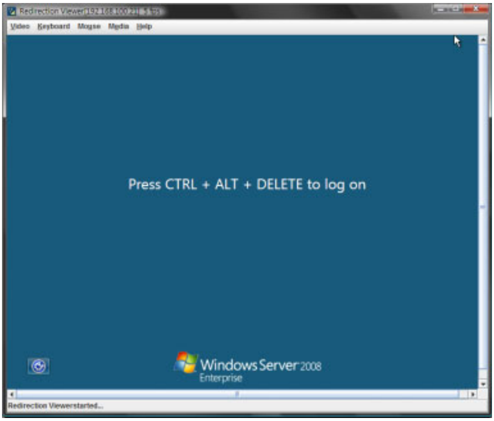
1 Remote Console: Check this item to enable the remote console and manage the server from a remote site via Java or ActiveX (for Internet Explorer).

2 Launch Console: Click this button to launch the remote console via the Java script.

3 Java Starting: Upon launching the remote console, a screen displays, indicating that Java is starting.

Once the process is completed, a screen displays as shown below.

Figure 3-83. Java Started


Redirection Viewer[192.168.100.21] 5 fps
Video
Keyboard
Mouse
Media
Help
Windows Server 2008
Enterprise

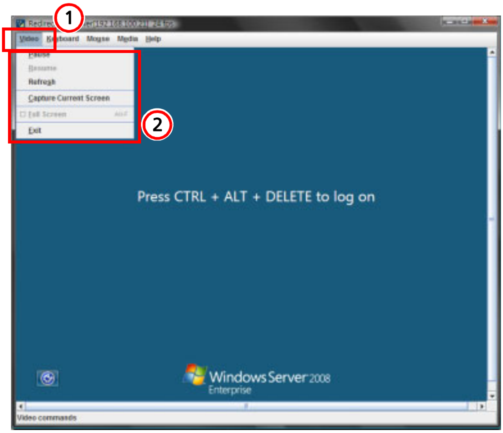
Press CTRL + ALT + DELETE to log on

Redirection Viewerstarted...

Remote Console - Video

This feature allows you to configure video settings for your remote console. When you click on the Video icon in the Menu bar (1), the video settings of the remote console displays as shown below.

Figure 3-84. Video


1
2
Video
Keyboard
Mouse
Media
Help
Pause
Resume
Refresh
Capture Current Screen
☐ Full Screen
Alt-F
Exit
Windows Server 2008
Enterprise

Press CTRL + ALT + DELETE to log on

Video commands

1 Video: Click this item to configure and manage the video settings of a server on a remote site via the Remote Console.

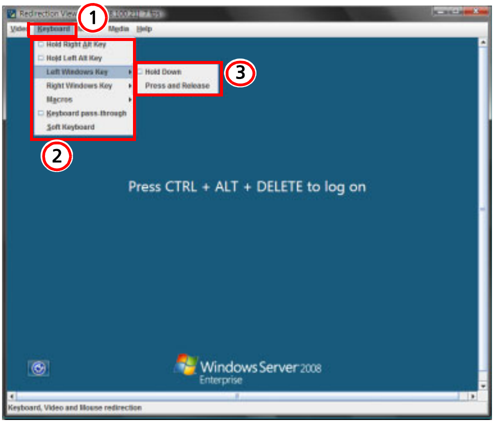
2 Video Options: The pull-down submenu contains the options listed below.

- Pause: Click this item to freeze the screen.
- Resume: Click this item to re-activate a frozen screen.
- Refresh: Click this item to refresh the system.
- Capture Current Screen: Click this item to capture the current screen display.
- Full Screen: Click this item to use the full screen mode.
- Exit: Click this item to exit the Remote Console.

Remote Console - Keyboard

This feature allows you to configure keyboard settings for your remote console. When you click on the Keyboard item in the Menu bar (1), the keyboard settings of the remote console displays as shown below.

Figure 3-85. Keyboard


Redirection View
①
Video
Keyboard
Media
Help
☐ Hold Right Alt Key
☐ Hold Left Alt Key
Left Windows Key
Right Windows Key
Macros
☐ Keyboard pass-through
Soft Keyboard
☐ Hold Down
Press and Release
③
②
Press CTRL + ALT + DELETE to log on
Windows Server 2008
Enterprise
Keyboard, Video and Mouse redirection

1 Keyboard: Click this item to configure and manage the keyboard settings of a server on a remote site via the Remote Console.

2 Options: The pull-down submenu contains the options listed below.

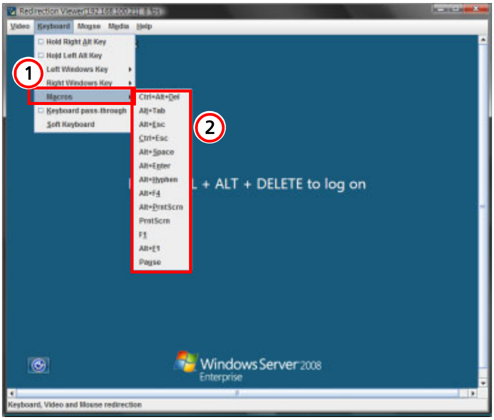
- Hold Right Alt Key: Check this item to emulate right alt key press.
- Hold Left Alt Key: Check this item to emulate left alt key press.
- Left Window Key: Click on this item to display the Left Window Key submenu as follows:
  - Callout #3. Hold down: Check this item to emulate left

  window key press.

  - Callout# 3. Press and Release: Click on this option to press and release the left window key.

- Right Window Key: Click on this item to display the Right Window Key submenu as follows:
  - Callout# 3. Hold down: Check this item to emulate right window key press.
  - Callout# 3. Press and Release: Click on this option to press and release the right window key.
- Macros: Click this item (1) to display and to use the Macros hot keys listed in its pull-down submenu as shown in the screen below.

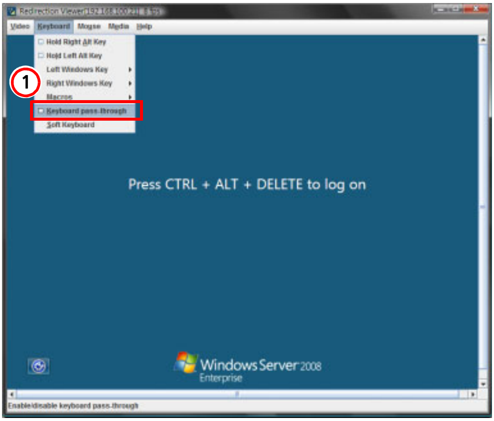
Figure 3-86. Macros


Redirection Viewer[192.168.100.21] | 8 fps
Video
Keyboard
Mouse
Media
Help
☐ Hold Right Alt Key
☐ Hold Left Alt Key
Left Windows Key
Right Windows Key
Macros
☐ Keyboard pass-through
Soft Keyboard
Ctrl+Alt+Del
Alt+Tab
Alt+Esc
Ctrl+Esc
Alt+Space
Alt+Enter
Alt+Hyphen
Alt+F4
Alt+PrntScrn
PrntScrn
F1
Alt+F1
Pause
①
②
L + ALT + DELETE to log on
Windows Server 2008
Enterprise
Keyboard, Video and Mouse redirection

- Ctrl+Alt+Del
- Alt+Tab
- Alt+Esc
- Ctrl+Esc
- Alt+Space
- Alt+Enter
- Alt+Hyphen
- Alt+F4
- Alt+PrntScrn (Print Screen)
- PrntScrn

- F1
- Pause
- Keyboard pass-through: Click this item (1) to use your local keyboard for the remote console.

Figure 3-87. Keyboard Pass-through.


Redirection Viewer[192.168.100.21]
Video
Keyboard
Mouse
Media
Help
☐ Hold Right Alt Key
☐ Hold Left Alt Key
Left Windows Key
Right Windows Key
Macros
☐ Keyboard pass-through
Soft Keyboard
1
Windows Server 2008
Enterprise

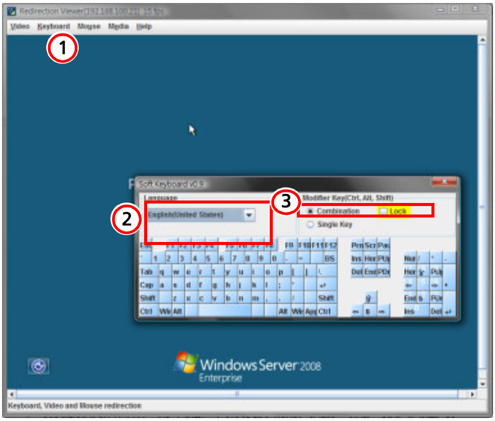
Press CTRL + ALT + DELETE to log on

Enable/disable keyboard pass-through

Note: This feature-"Keyboard Pass-through" provides full keyboard support. It will send all keys, including special key combinations to the host server.

1 Soft Keyboard: Select the item Soft Keyboard (1) to use soft keyboard for the remote console as shown below.

Figure 3-88. Soft Keyboard


Redirection Viewer[192.168.100.2] - 15 fps
Video
Keyboard
Mouse
Media
Help
1
Soft Keyboard v0.9
2
3
Windows Server 2008
Enterprise

Language: English(United States)

Modifier Key(Ctrl, Alt, Shift): ● Combination ☐ Lock ○ Single Key

Keyboard, Video and Mouse redirection

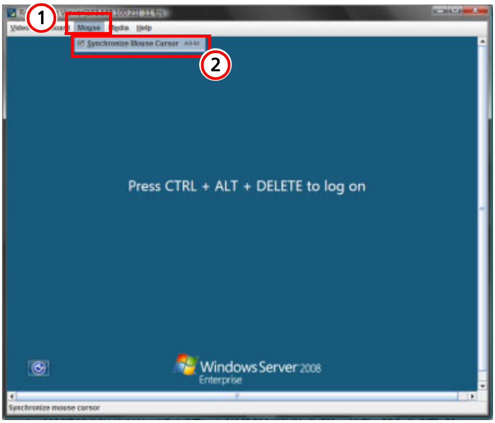
2 Language: From the pull down menu, select the following language settings: English (United States), English (United Kingdom), Japanese, and Germany.

3 Modifier Key (CRTL, Alt, Shift) - Select the keys: <Ctrl>, <Alt>, and <Shift> to work as a special key combination or as a single key. Check the box in front of "Lock" to lock the key combination.

Remote Console - Mouse

This feature allows you to configure the mouse settings for your remote console. When you click on Mouse in the Menu bar (1), the Mouse settings of the remote console displays as shown below.

Figure 3-89. Mouse


1
2
Video
Mouse
Media
Help
Synchronize Mouse Cursor Alt+M
Press CTRL + ALT + DELETE to log on
Windows Server 2008
Enterprise
Synchronize mouse cursor

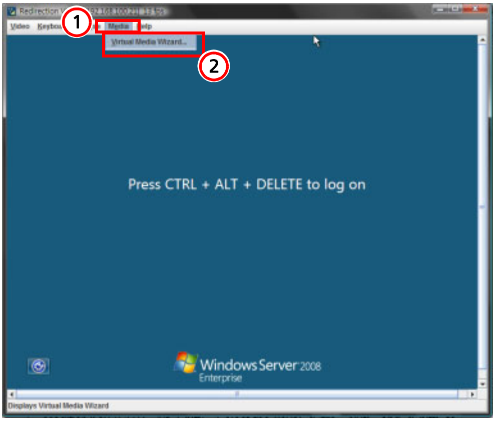
The pull-down submenu contains the option listed below.

Synchronize Mouse Cursor Alt+M (2): Click this item (or press <Alt> and <M> keys simultaneously) to synchronize your local mouse cursor and the mouse cursor of your remote console.

Remote Console - Media

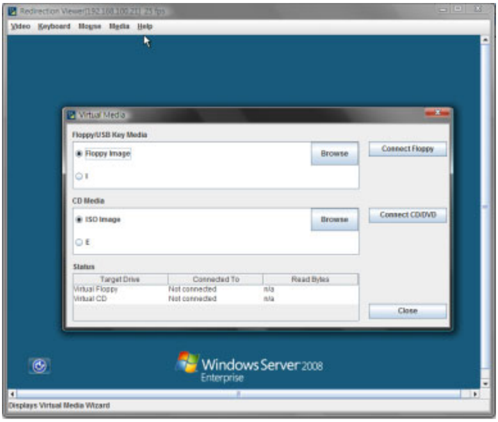
This feature allows you to configure media virtualization settings for your remote console. When you click on Media in the Menu bar (1), the Media settings of the remote console displays as shown below.

Figure 3-90. Media


Redirection V
Video
Keyboa
Media
elp
Virtual Media Wizard...
1
2
Press CTRL + ALT + DELETE to log on
Windows Server 2008
Enterprise
Displays Virtual Media Wizard

Virtual Media Wizard (2): Click on this item on the pull-down submenu to launch the Virtual Media Wizard, which allows you to configure Virtual Media settings as shown below.

Figure 3-91. Virtual Media Settings


Redirection Viewer[192.168.100.211] 25 fps
Video
Keyboard
Mouse
Media
Help
Virtual Media
Floppy/USB Key Media
Browse
Connect Floppy
CD Media
Browse
Connect CD/DVD
Close
Windows Server 2008
Enterprise
Displays Virtual Media Wizard

● Floppy Image

○ I

● ISO Image

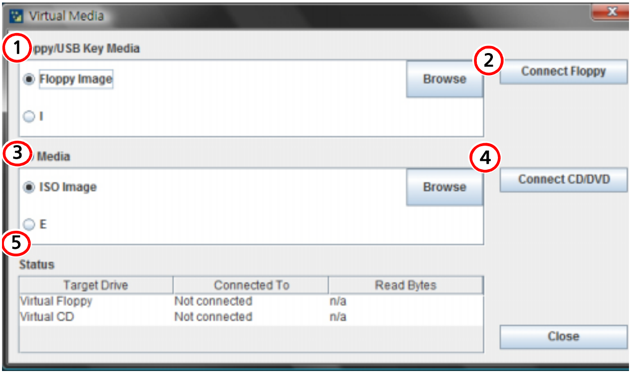
○ E

Status

Target Drive	Connected To	Read Bytes
Virtual Floppy	Not connected	n/a
Virtual CD	Not connected	n/a

Virtual Media

Figure 3-92. Virtual Media


Virtual Media
1
ppy/USB Key Media
● Floppy Image
○ I
Browse
2
Connect Floppy
3
Media
● ISO Image
○ E
Browse
4
Connect CD/DVD
5
Close

Status

Target Drive	Connected To	Read Bytes
Virtual Floppy	Not connected	n/a
Virtual CD	Not connected	n/a

1 Floppy/USB Key Media: This item allows the user to configure the Floppy/ USB Key Media settings. You can choose from the following items:

- Floppy Image
- A (Disk Drive A of the remote console)
- Browse: Click Browse to select the location of the Floppy ISO image.

2 Connect Floppy: After selecting the Virtual Media for your Remote Console, click on the Connect Floppy icon to connect to the remote console via the Floppy drive you chose.

3 CD Media: This item allows the user to configure CD Media settings. You can choose from the following items:

- ISO Image
- <Drive letter> (CD/DVD Drive)
- Browse: Click Browse to select the location of the CD/DVD ISO image.

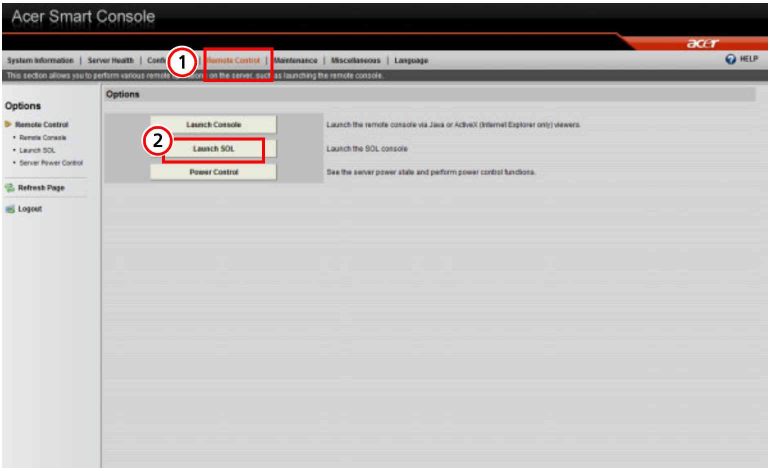
4 Connect CD/DVD: After selecting the Virtual Media for your Remote Console, click Connect CD/DVD to connect to the remote console via the CD/DVD you chose.

5 Status: This window displays the status of the target drive of the remote console.

Remote Control-Launch SOL

This feature allows you to launch the remote console by using Serial_over_LAN.When you click on the Remote Control icon in the Menu bar (1) to activate the Remote Control settings, the Remote Control Main Page will display.

Figure 3-93. Launch SOL


Acer Smart Console
acer
System Information
Server Health
Confi
1
Remote Control
Maintenance
Miscellaneous
Language
HELP
Options
Options
Remote Control
Remote Console
Launch SOL
Server Power Control
Refresh Page
Logout
Launch Console
2
Launch SOL
Power Control

Launch the remote console via Java or ActiveX (Internet Explorer only) viewers.

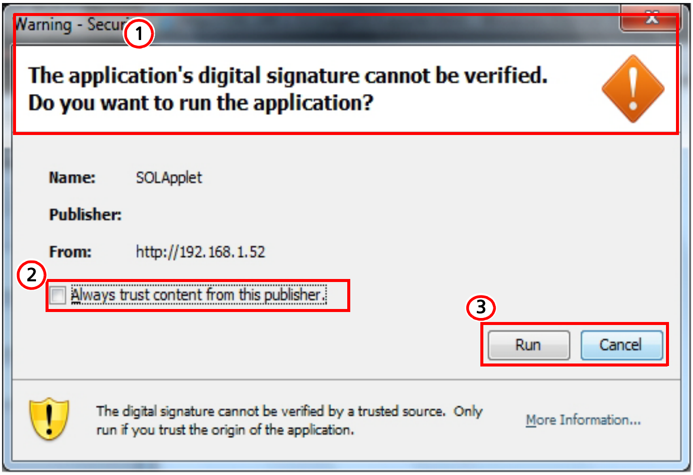
Launch the SOL console

See the server power state and perform power control functions.

1 Launch SOL: Click on this item in the left Options window to activate SOL(Serial Over LAN) support, which provides serial port connections over LAN and allows the user to access a host server via Console Redirection. It also allows a system administrator to monitor and manage a server from a remote site.

2 The Launch SOL Button: Click on this button to launch SOL. The following screen displays to indicate the progress of SOL launching as shown on the next page.

Figure 3-94. SOL ConfirmationWindow



The application's digital signature cannot be verified.
Do you want to run the application?

Name: SOLApplet

Publisher:

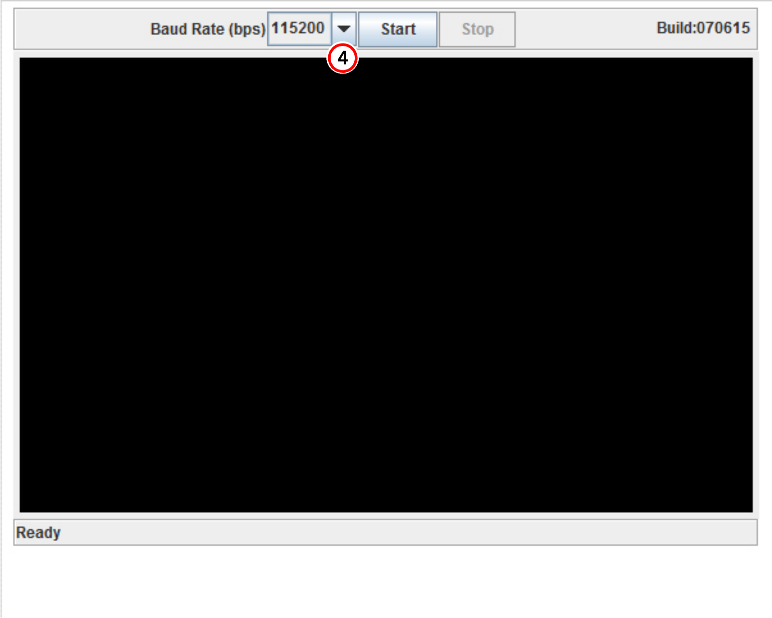
From: http://192.168.1.52

☐ Always trust content from this publisher.

The digital signature cannot be verified by a trusted source. Only run if you trust the origin of the application.

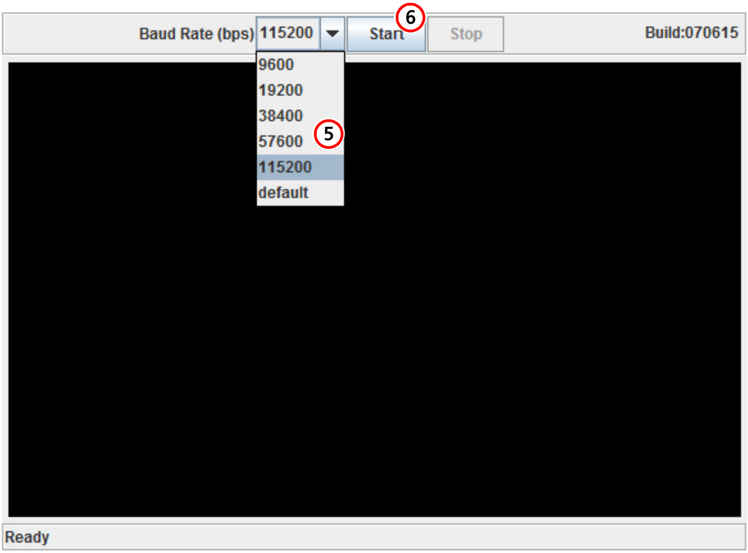
1. Security Warning: Once you've launched SOL, a security warning will appear, indicating that the application's digital signature cannot be verified
2. Always trust content from this publisher: Click on this item to give full access to this publisher, eliminating further security warnings.
3. Click Run to continue with SOL launching. Click Cancel to cancel SOL launching. If you continue with SOL launching, the following screen will appear.

Figure 3-95. Baud Rate


Baud Rate (bps)
115200
Start
Stop
Build:070615
4
Ready

4 Click on the dropdown menu to pull down the Baud Rate submenu, which will allow you to select the Baud Rate for serial line transfer (see the following figure).

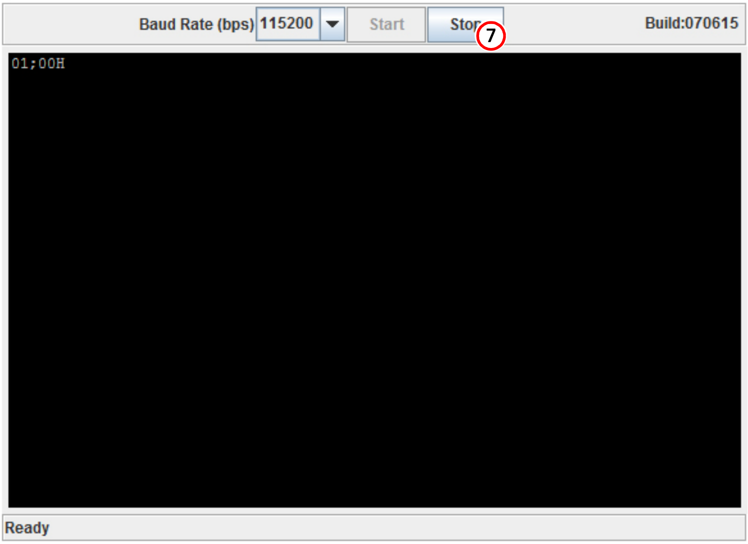
Figure 3-96. Setting the Baud Rate


Baud Rate (bps)
115200
Start
Stop
Build:070615
9600
19200
38400
57600
115200
default
5
6
Ready

5 Baud Rate (bps): You can select a Baud rate from the list as your SOL transfer rate. The options are: 9600 bps (bit-per-second), 19200 bps, 38400 bps, 57600 bps, 115200 bps, and default. Make sure that the Baud Rate selected here matches the Baud Rate set in the BIOS.

6 Once you've selected the Baud rate, press <Start> to start the session.

Figure 3-97. Stop the SOL Session


Baud Rate (bps)
115200
Start
Stop
7
Build:070615
Ready

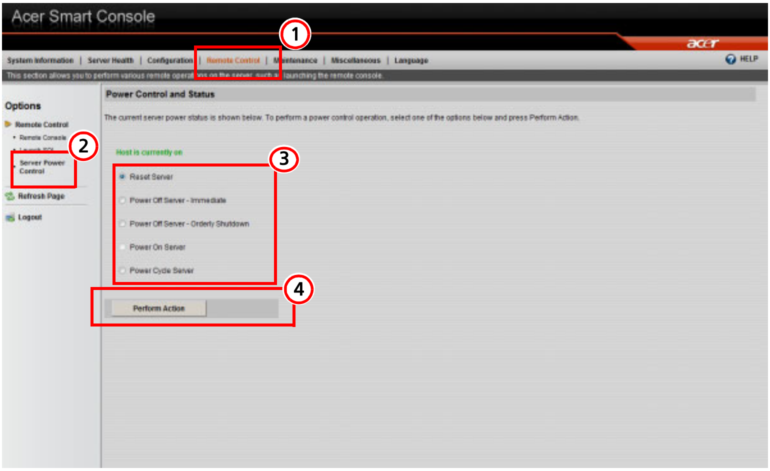
```
01;00H
```

7 You can also press <Stop> to abort the SOL session.

Server Power Control

This feature allows you to configure power management settings for your remote console. When you click on the Remote Control icon in the Menu bar (1) to activate the Remote Control settings, the Remote Control Main Page will display.

Figure 3-98. Power Control


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Remote Control
Remote Console
Launch SOL
Server Power Control
Refresh Page
Logout
Power Control and Status
● Reset Server
○ Power Off Server - Immediate
○ Power Off Server - Orderly Shutdown
○ Power On Server
○ Power Cycle Server
Perform Action
1
2
3
4

This section allows you to perform various remote operations on the server, such as launching the remote console.

The current server power status is shown below. To perform a power control operation, select one of the options below and press Perform Action.

Host is currently on

Click Server Power Control in the left Options Window (2) to display the Power Control submenu as shown above.

(3): Power Control and Status: This submenu indicates the status and the current power control settings of the host server (the remote console). The status of the remote server are displayed as below:

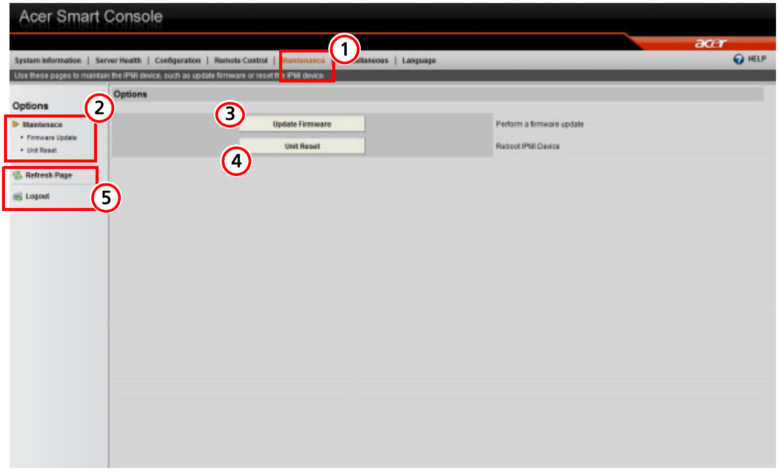
- Reset Server: Click on this radio button to reset the power control settings for the remote server.
- Power Off Server - Immediately: Click on this radio button to immediately power off the remote server.
- Power Off Server - Orderly Shutdown: Click on this radio button to power off and shut down the remote server in an orderly manner.
- Power On Server: Click on this radio button to power on the remote server.
- Power Cycle Server: Click on this radio button to power cycle the remote server.

(4): Perform Action: After selecting a power setting from the list above, click on this item to execute the command and perform the action.

Maintenance

Use this feature to manage and configure IPMI devices.When you click on the Maintenance icon (1) in the Menu bar, the Maintenance Main page will display.

Figure 3-99. Maintenance


Acer Smart Console
acer
System Information
Server Health
Configuration
Remote Control
Maintenance
llaneous
Language
HELP
Options
Maintenace
Firmware Update
Unit Reset
Refresh Page
Logout
Options
Update Firmware
Unit Reset
1
2
3
4
5

Use these pages to maintain the IPMI device, such as update firmware or reset the IPMI device.

Perform a firmware update

Reboot IPMI Device

Options: Click on the Options window on the left (2) to use Maintenance settings.

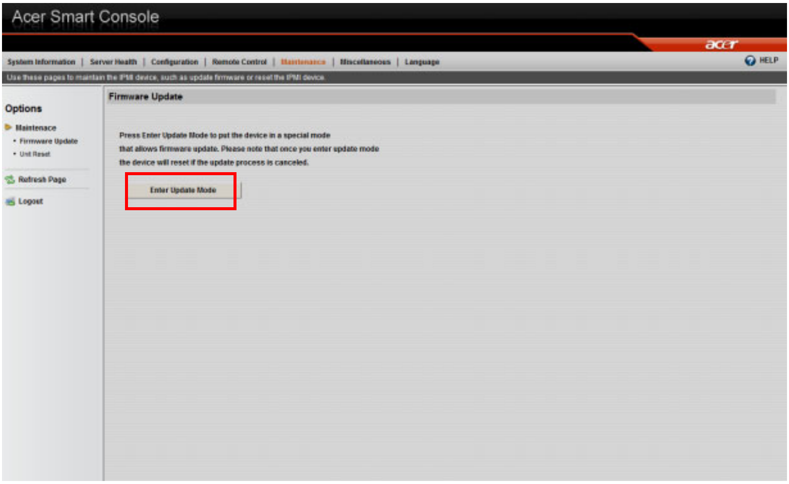
The options include the following:

- Firmware Update (3): Click this item to update the BMC firmware (the BIOS) of the remote server. The Firmware Update screen is shown in the next section.
- Unit Reset (4): Press the <Unit Reset> button to reboot the BMC (IPMI) Controller

Maintenance - Firmware Update

When you click on the Maintenance icon in the Menu bar, the Maintenance Main page displays as below.

Figure 3-100. Firmware


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Firmware Update
Options
Maintenace
Firmware Update
Unit Reset
Refresh Page
Logout
Enter Update Mode

Use these pages to maintain the IPMI device, such as update firmware or reset the IPMI device.

Press Enter Update Mode to put the device in a special mode that allows firmware update. Please note that once you enter update mode the device will reset if the update process is canceled.

Enter Update Mode: Click on this item to enter the update mode.

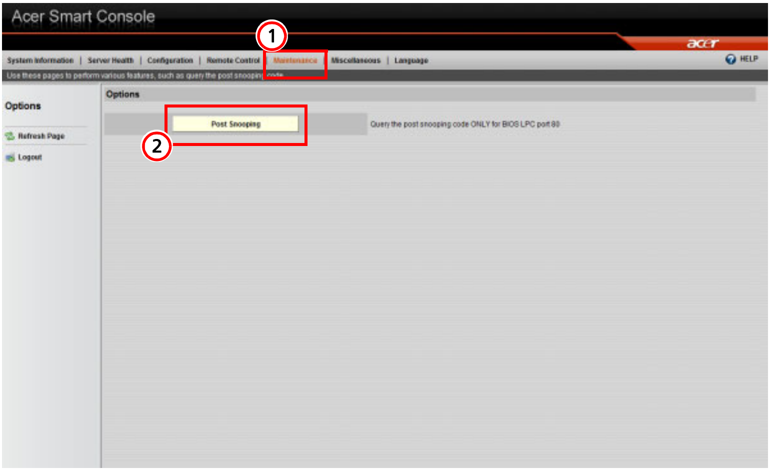
Warning! Once you've entered the firmware update mode, the device will be reset even if you cancel the process of firmware updating.

Notes:
1. When updating firmware, you are given the option to "Preserve Configuration." Uncheck this option to load the factory default settings, and all the configuration settings will be lost.
2. If you are using the Static IP mode, it is not recommended to uncheck the option-"Preserve Configuration," since it will reset the network settings to the DHCP (Dynamic Host Configuration Protocol) mode.

Miscellaneous

This feature allows the user to perform network activities.Click on the Miscellaneous icon (1) in the Menu bar to display the Miscellaneous page.

Figure 3-101. Miscellaneous


Acer Smart Console
acer
System Information | Server Health | Configuration | Remote Control | Maintenance | Miscellaneous | Language
HELP
Options
Refresh Page
Logout
Options
Post Snooping
1
2

Use these pages to perform various features, such as query the post snooping code.

Query the post snooping code ONLY for BIOS LPC port 80

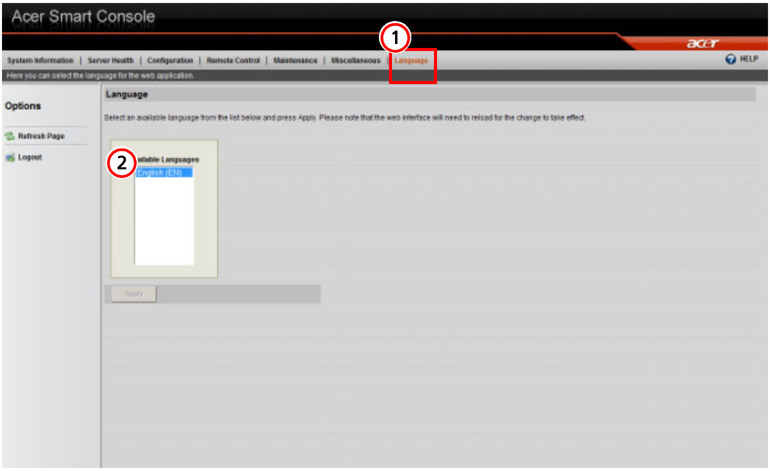
Options: Click on the Options window on the left (2) to use Miscellaneous settings. The options include the following:

- Post Snooping: Click on this item to query the POST (Power_On_Selt-Test) Snooping code for BIOS LPC Port80.

Language

This feature allows you to configure Language Settings for your IPMI connections. Click on the Language icon (1) in the Menu bar to display the Language page as shown below.

Figure 3-102. Language


Acer Smart Console
acer
System Information
Server Health
Configuration
Remote Control
Maintenance
Miscellaneous
Language
HELP
Options
Refresh Page
Logout
Language
ailable Languages
Apply
1
2

Here you can select the language for the web application.

Select an available language from the list below and press Apply. Please note that the web interface will need to reload for the change to take effect.

English (EN)

Available Languages (2): The Available Languages submenu displays language setting options. (Currently, English is the only language available for this utility.)

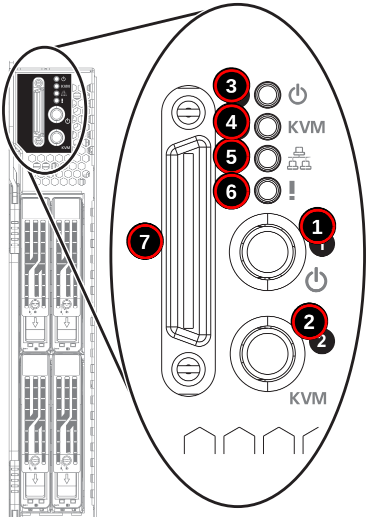
AB460 F1

External and Internal Structure

This chapter describes the AB460 F1 blade module. Installation and maintenance should be performed by experienced technicians only.

See Figure 3-103 for a front view of the blade unit and the following table for its features.

Figure 3-103. AB460 F1 Blade Control Panel



Item	Function	State	Description
1	Power Button	N/A	Turns blade module on and off
2	KVM Button	N/A	Initiates KVM function

Item	Function	State	Description
3	Power LED	Green	Indicates power status “On”
		Orange	Indicates power status “Off” (with power cables plugged into the blade chassis enclosure)
4	KVM/ID LED	Blue	Indicates KVM being utilized on blade unit
		Flashing Blue	Indicates ID activated on blade module
5	Network/ IB LED	Flashing Green	Indicates network activity over LAN
		Flashing Orange	Indicates network activity over InfiniBand module
6	System Fault LED	Red	Indicates a memory error, overheat, VGA error or any error that prevents booting
7	KVM Connector	N/A	Connector for KVM cable

Power Button

Each blade has its own power button so that individual blade units within the enclosure may be turned on or off independently of the others. Press the power button (#1) to turn on the blade server. The power LED (#3) will turn green. To turn off, press and hold the power button for >4 seconds and the power LED will turn orange.

KVM Button

KVM stands for Keyboard/Video/Mouse. With KVM, a user can control multiple blades with a single keyboard/video/mouse setup. Connect your keyboard, mouse and monitor to the USB and VGA connectors on the CMM module, then push the KVM button on the control panel of the blade module you wish to access.

KVM Connector

Alternatively, you may connect a KVM cable (CBL-0218L, with a keyboard/video/mouse attached) to the KVM connector (#7) of the blade you wish to access. To switch to another blade, disconnect the cable then reconnect it to the new blade.

See the Acer Smart Blade Console on page 28 for further details on using the KVM function remotely.

Front Panel LED Indicators

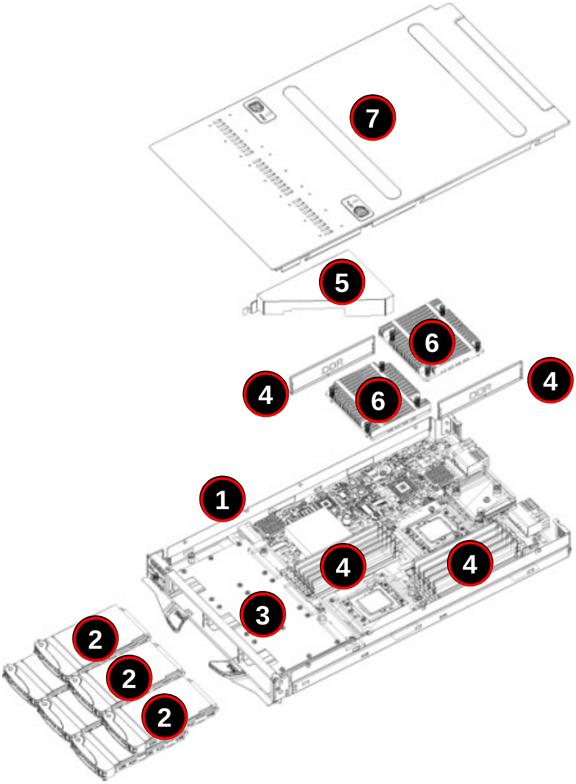
Blade module LEDs are described below in the following table.

LED	State	Description
Power LED	Green	Power On
	Amber	Standby
	Red	Power Failure[1]
KVM/ID LED (Blue)	Steady On	Indicates that KVM has been initialized on this blade module
	Flashing	Serves as a ID indicator (the ID function is activated with a management program)
Network LED (Green)	Flashing	Flashes on and off to indicate traffic (Tx and Rx data) on the LAN connection to this blade module.
System Fault LED (Red)	Steady On	This LED illuminates red when a fatal error occurs. This may be the result of a memory error, a VGA error or any other fatal error that prevents the operating system from booting up.

[1] In the event of a power failure, the 3+1 Redundant Power Supply (if included in your system's configuration) picks up the system load to provide uninterrupted operation. The failed power supply should be replaced with a new one as soon as possible.

Blade Unit Components

Figure 3-104. Exploded View of AB460 F1 Blade Module



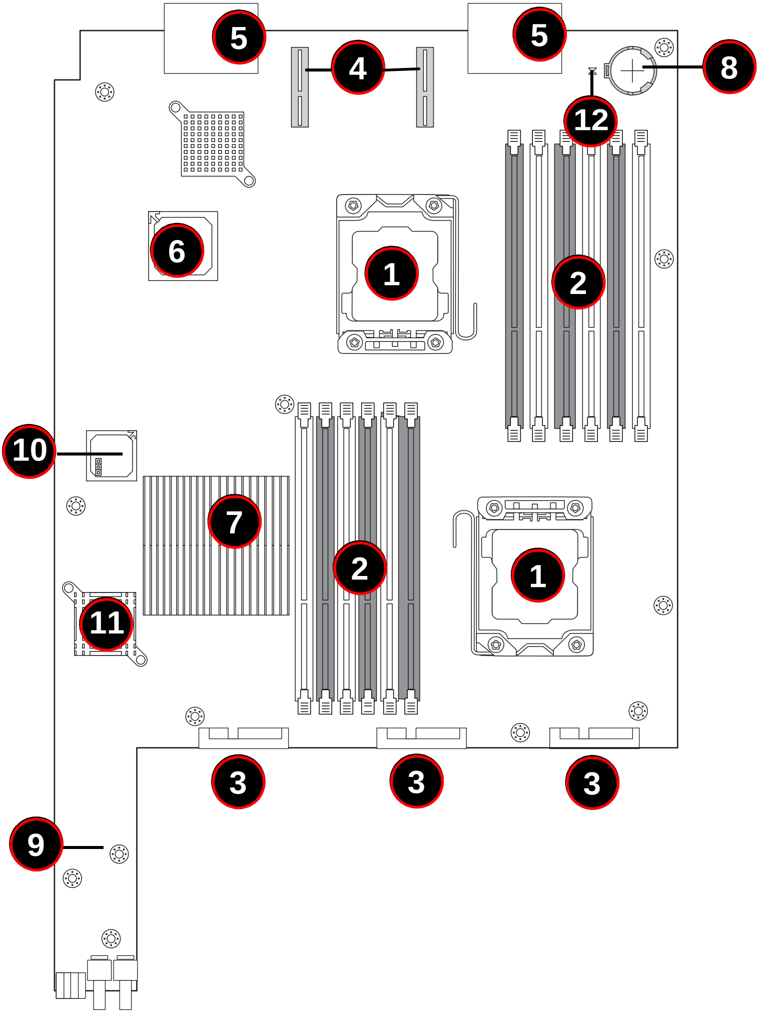
Main components of the AB460 F1 blade module are shown in Figure 3-104 and described in the following table.

Item	Description
1	Blade Unit/Module
2	SAS2/SATA Hard Drives (six per blade module)
3	SAS2/SATA Hard Drive Bays

Item	Description
4	DIMMs (system memory)
5	Airflow Deflector
6	CPU Heatsinks
7	Top Cover

Mainboard

Figure 3-105. AB460 F1 Mainboard


5
5
4
8
12
6
1
2
10
7
2
1
11
3
3
3
9

Item	Description
1	LGA 1366 CPU Sockets
2	DIMM Slots
3	6 SAS2/SATA Hard Drive Bays
4	InfiniBand Connectors (for InfiniBand cards)
5	Gbx Connectors (for power and logic to backplane)
6	ICH10
7	Intel 5500 chip
8	Onboard Battery
9	Front IO Module
10	BIOS Chip
11	LSI 2008 SAS2 Controller
12	JPT1 (CMOS clear)

CMOS Clear

JBT1 is used to clear CMOS and will also clear any passwords. JBT1 consists of two contact pads located near the BIOS chip (#12 in Figure 3-104).

Clearing CMOS

1. First power down the blade and remove it from the enclosure.
2. Remove the blade cover to access the mainboard (see "Removing/ Replacing the Blade Cover" on page 18 for further details). Short the CMOS pads with a metal object such as a small screwdriver.
3. Replace the cover, install the blade back into the enclosure and power it on.

Memory Support

The AB460 F1 blade module supports up to 192 GB/48 GB of ECC Registered/Unbuffered ECC DDR3-1333 SDRAM in twelve DIMM sockets.

Memory Installation

The mainboard of each blade unit must be populated with DIMMs (Dual In-line Memory Modules) to provide system memory. **The DIMMs should all be of the same size and speed and from the same manufacturer due to compatibility issues.**

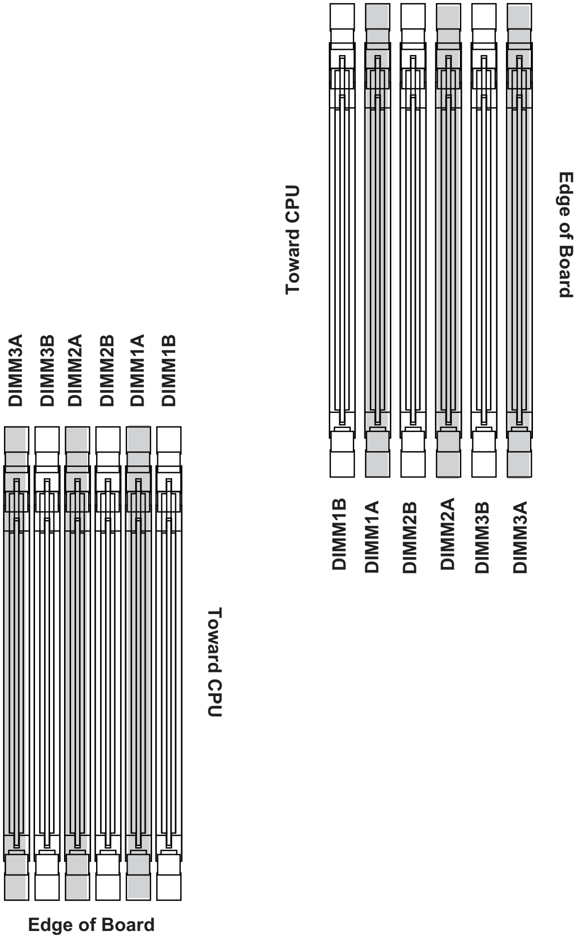
Populating Memory Slots

The mainboard of a AB460 F1 blade module has twelve memory slots, depending upon the blade model. Both interleaved and non-interleaved memory are supported, so you may populate any number of DIMM slots.

Populating three slots at a time (DIMM1A + DIMM2A+ DIMM3A, etc.) with memory modules of the same size and of the same type will result in dual-channel, interleaved memory, which is faster than single-channel, non-interleaved memory. See the following tables and Figure 3-106 for details.

Note: For an interleaved configuration, memory modules of the same size and speed must be installed in pairs. You should not mix DIMMs of different sizes and speeds.

Figure 3-106. 12-Slot DIMM Numbering


Toward CPU
Edge of Board
DIMM1B
DIMM1A
DIMM2B
DIMM2A
DIMM3B
DIMM3A
DIMM3A
DIMM3B
DIMM2A
DIMM2B
DIMM1A
DIMM1B
Toward CPU
Edge of Board

Independent Mode: Single Processor Configuration

Total Capacity	DIMM 1B	DIMM 1A	DIMM 2B	DIMM 2A	DIMM 3B	DIMM 3A
1GB		1GB				
2GB		1GB		1GB		
3GB		1GB		1GB		1GB
4GB	1GB	1GB	1GB	1GB		
6GB	1GB	1GB	1GB	1GB	1GB	1GB
2GB		2GB				
4GB		2GB		2GB		
6GB		2GB		2GB		2GB
8GB	2GB	2GB	2GB	2GB		
12GB	2GB	2GB	2GB	2GB	2GB	2GB
4GB		4GB				
8GB		4GB		4GB		
12GB		4GB		4GB		4GB
16GB	4GB	4GB	4GB	4GB		
24GB	4GB	4GB	4GB	4GB	4GB	4GB
8GB		8GB				
16GB		8GB		8GB		
24GB		8GB		8GB		8GB
32GB	8GB	8GB	8GB	8GB		
48GB	8GB	8GB	8GB	8GB	8GB	8GB
16GB		16GB				
32GB		16GB		16GB		
48GB		16GB		16GB		16GB
64GB	16GB	16GB	16GB	16GB		
96GB	16GB	16GB	16GB	16GB	16GB	16GB

Independent Mode: Dual processor configuration.

Total Capacity	CPU1						CPU2					
DIMM	1B	1A	2B	2A	3B	3A	1B	1A	2B	2A	3B	3A
2GB		1GB						1GB				
3GB		1GB		1GB		1GB						
4GB		1GB		1GB				1GB		1GB		
6GB		1GB		1GB		1GB		1GB		1GB		1GB
8GB	1GB	1GB	1GB	1GB			1GB	1GB	1GB	1GB		
9GB	1GB	1GB	1GB	1GB	1GB	1GB		1GB		1GB		1GB
12GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB
4GB		2GB						2GB				
6GB		2GB		2GB		2GB						
8GB		2GB		2GB				2GB		2GB		
12GB		2GB		2GB		2GB		2GB		2GB		2GB
16GB	2GB	2GB	2GB	2GB			2GB	2GB	2GB	2GB		
18GB	2GB	2GB	2GB	2GB	2GB	2GB		2GB		2GB		2GB
24GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB
8GB		4GB						4GB				
12GB		4GB		4GB		4GB						
16GB		4GB		4GB				4GB		4GB		
24GB		4GB		4GB		4GB		4GB		4GB		4GB
32GB	4GB	4GB	4GB	4GB			4GB	4GB	4GB	4GB		
36GB	4GB	4GB	4GB	4GB	4GB	4GB		4GB		4GB		4GB
48GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB

Total Capacity	**CPU1**						**CPU2**					
DIMM	**1B**	**1A**	**2B**	**2A**	**3B**	**3A**	**1B**	**1A**	**2B**	**2A**	**3B**	**3A**
16GB		8GB						8GB				
24GB		8GB		8GB		8GB						
32GB		8GB		8GB				8GB		8GB		
48GB		8GB		8GB		8GB		8GB		8GB		8GB
64GB	8GB	8GB	8GB	8GB			8GB	8GB	8GB	8GB		
72GB	8GB	8GB	8GB	8GB	8GB	8GB		8GB		8GB		8GB
96GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB
32GB		16GB						16GB				
48GB		16GB		16GB		16GB						
64GB		16GB		16GB				16GB		16GB		
96GB		16GB		16GB		16GB		16GB		16GB		16GB
128GB	16GB	16GB	16GB	16GB			16GB	16GB	16GB	16GB		
144GB	16GB	16GB	16GB	16GB	16GB	16GB		16GB		16GB		16GB
192GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB

Mirroring or Lockstep Mode: Single processor configuration

Please follow the table as shown below. The same rules are applied to the CPU2 memory channel.

For mirroring mode, there is a primary and a copy of the primary image. By this definition, the effective size of memory is reduced by at least one-half

Total Capacity	DIMM 1B	DIMM 1A	DIMM 2B	DIMM 2A
2GB		1GB		1GB
4GB	1GB	1GB	1GB	1GB
4GB		2GB		2GB
8GB	2GB	2GB	2GB	2GB
8GB		4GB		4GB
16GB	4GB	4GB	4GB	4GB
16GB		8GB		8GB
32GB	8GB	8GB	8GB	8GB
32GB		16GB		16GB
64GB	16GB	16GB	16GB	16GB

Mirroring or Lockstep Mode: Dual processor configuration

Total Capacity	**CPU1**						**CPU2**					
DIMM	**1B**	**1A**	**2B**	**2A**	**3B**	**3A**	**1B**	**1A**	**2B**	**2A**	**3B**	**3A**
2GB		1GB		1GB								
4GB		1GB		1GB				1GB		1GB		
6GB	1GB	1GB	1GB	1GB				1GB		1GB		
8GB	1GB	1GB	1GB	1GB			1GB	1GB	1GB	1GB		
4GB		2GB		2GB								
8GB		2GB		2GB				2GB		2GB		
12GB	2GB	2GB	2GB	2GB				2GB		2GB		
16GB	2GB	2GB	2GB	2GB			2GB	2GB	2GB	2GB		
8GB		4GB		4GB								
16GB		4GB		4GB				4GB		4GB		
24GB	4GB	4GB	4GB	4GB				4GB		4GB		
32GB	4GB	4GB	4GB	4GB			4GB	4GB	4GB	4GB		
16GB		8GB		8GB								
32GB		8GB		8GB				8GB		8GB		
48GB	8GB	8GB	8GB	8GB				8GB		8GB		
64GB	8GB	8GB	8GB	8GB			8GB	8GB	8GB	8GB		
32GB		16GB		16GB								
64GB		16GB		16GB				16GB		16GB		
96GB	16GB	16GB	16GB	16GB				16GB		16GB		
128GB	16GB	16GB	16GB	16GB			16GB	16GB	16GB	16GB		

Sparing Mode: Single processor configuration

For sparing mode, there is one or two memory modules as spared. By this definition, the effective size of memory is reduced by the capacity of one (when three memory modules installed) or two (when six memory modules installed) memory modules installed per processor.

Total Capacity	DIMM 1B	DIMM 1A	DIMM 2B	DIMM 2A	DIMM 3B	DIMM 3A
3GB		1GB		1GB		1GB
6GB	1GB	1GB	1GB	1GB	1GB	1GB
6GB		2GB		2GB		2GB
12GB	2GB	2GB	2GB	2GB	2GB	2GB
12GB		4GB		4GB		4GB
24GB	4GB	4GB	4GB	4GB	4GB	4GB
24GB		8GB		8GB		8GB
48GB	8GB	8GB	8GB	8GB	8GB	8GB
48GB		16GB		16GB		16GB
96GB	16GB	16GB	16GB	16GB	16GB	16GB

Sparing Mode: Dual processor configuration

Total Capacity	CPU1						CPU2					
DIMM	**1B**	**1A**	**2B**	**2A**	**3B**	**3A**	**1B**	**1A**	**2B**	**2A**	**3B**	**3A**
3GB		1GB		1GB		1GB						
6GB		1GB		1GB		1GB		1GB		1GB		1GB
9GB	1GB	1GB	1GB	1GB	1GB	1GB		1GB		1GB		1GB

Total Capacity	CPU1						CPU2					
DIMM	**1B**	**1A**	**2B**	**2A**	**3B**	**3A**	**1B**	**1A**	**2B**	**2A**	**3B**	**3A**
12GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB
6GB		2GB		2GB		2GB						
12GB		2GB		2GB		2GB		2GB		2GB		2GB
18GB	2GB	2GB	2GB	2GB	2GB	2GB		2GB		2GB		2GB
24GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB
12GB		4GB		4GB		4GB						
24GB		4GB		4GB		4GB		4GB		4GB		4GB
36GB	4GB	4GB	4GB	4GB	4GB	4GB		4GB		4GB		4GB
48GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB
24GB		8GB		8GB		8GB						
48GB		8GB		8GB		8GB		8GB		8GB		8GB
72GB	8GB	8GB	8GB	8GB	8GB	8GB		8GB		8GB		8GB
96GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB
48GB		16GB		16GB		16GB						
96GB		16GB		16GB		16GB		16GB		16GB		16GB
144GB	16GB	16GB	16GB	16GB	16GB	16GB		16GB		16GB		16GB
192GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB

Note: The DIMM slot number specified in the table equals the DIMM slot to be populated. A “---” indicates that the DIMM slot should be left unpopulated.

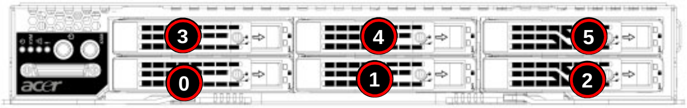
Note: Though multiple DIMM memory module types and speeds may be supported, you need to use DIMM memory modules of the same speed and type.

Hard Disk Drives

The AB460 F1 blade unit accommodates up to six 2.5" SAS2/SATA hard disk drives, which are mounted in drive “carriers”. The drives are hot-swappable and can be removed or replaced without powering down the blade unit they reside in. The six drives can be used to set up a RAID array or JBOD.

AB460 F1 HDD Numbering Sequence

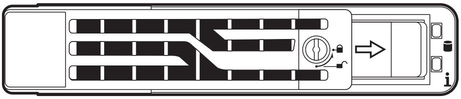
Figure 3-107. AB460 F1 HDD Numbering Sequence



Warning! To maintain proper airflow hard drive bays must have drive carriers or dummies inserted during operation.

AB460 F1 HDD LED Indicators

Figure 3-108. AB460 F1 HDD LED Indicators



Status	**(Blue)**	**i** **Red**
Power On	ON	One Blink Red
HDD Access	Blink	OFF

Status	🛢 **(Blue)**	ℹ **Red**
HDD Failure	OFF	ON
HDD Rebuild	Blink	OFF
HDD Locate	OFF	ON

AB460 F1 System BIOS

Introduction

This chapter describes the BIOS for AB460 F1 blade modules. The AB460 F1 blade modules use a AMI™ ROM BIOS that is stored in a flash chip. This BIOS can be easily upgraded using a floppy disk-based program.

BIOS

BIOS stands for Basic Input Output System. The AMI BIOS flash chip stores the system parameters, types of disk drives, video displays, etc. in the CMOS. The CMOS memory requires very little electrical power. When the blade unit is turned off, a backup battery provides power to the BIOS flash chip, enabling it to retain system parameters. Each time the blade is powered on it is configured with the values stored in the BIOS ROM by the system BIOS, which gains control at boot up.

How To Change the Configuration Data

The CMOS information that determines the system parameters may be changed by entering the BIOS Setup utility. This Setup utility can be accessed by pressing the <F2> key at the appropriate time during system boot. (See "Starting the Setup Utility" below.)

Starting the Setup Utility

Normally, the only visible POST (Power-On Self-Test) routine is the memory test. As the memory is being tested, press the <F2> key to enter the main menu of the BIOS Setup utility. From the main menu, you can access the other setup screens, such as the Security and Power menus.

Warning! To prevent possible boot failure, do not shut down or reset the system while updating the BIOS.

BIOS Updates

It may be necessary to update the BIOS used in the blade modules on occasion. However, it is recommended that you not update BIOS if you are not experiencing problems with a blade module.

There are several methods you may use to upgrade (flash) your BIOS. After downloading the appropriate BIOS file (in a zip file format), follow one of the methods described below to flash the new BIOS.

Flashing BIOS

Use the procedures below to "Flash" your BIOS with a new update using the KVM dongle, USB ports on the CMM module or by use of a Floppy disk.

Flashing a BIOS using the KVM Dongle:

For this method, you must use a KVM cable (included with the system).

1. Copy the contents of the zip file to a bootable USB pen drive.
2. Connect the KVM cable to the KVM connector at the front of the blade you will be flashing the BIOS to.
3. Connect your bootable USB pen drive to one of the two USB slots on the KVM dongle.
4. Boot to the USB pen drive and go to the directory where you saved the contents of the zip file.
5. Type **flash filename.rom** (replace *filename.rom* by the actual ROM file name).

Flashing a BIOS using the USB Ports on the CMM:

1. Copy the contents of the zip file to a bootable USB pen drive.
2. Connect your bootable USB pen drive to one of the two USB slots on the CMM (located on the back side of the enclosure).
3. Boot to the USB pen drive and go to the directory where you saved the contents of the zip file.
4. Type **flash filename.rom** (replace *filename.rom* by the actual ROM file name).

Flashing a BIOS using a Floppy Image File

This method must be performed remotely.

1. Copy the image file from the zip file to your desktop.
2. Use the web browser or IPMIView to access your CMM remotely using its IP Address.
3. Go to the Virtual Media menu and select Floppy Image Upload.
4. Browse or Open to locate the **.img* file on your desktop and select it.
5. Press the Upload button and wait a few seconds for the image to upload to the CMM.
6. Once the upload finishes, turn on the blade module and press <Del> to enter the BIOS setup utility.
7. In the Boot Menu, bring **USB LS120: PEPPCMM VIRTUAL DISC 1** to the top of the boot priority list.
8. Exit while saving the changes. The blade module will boot to the virtual media (floppy image) **A:\>**.
9. Type **flash filename.rom**.

Note: Replace *filename.rom* by the actual ROM file name (such as **B8DTE142.rom** for example) in the command.

Running Setup

Note: Default settings are in **bold** text unless otherwise noted.

The BIOS setup options described in this section are selected by choosing the appropriate text from the Main BIOS Setup screen. All displayed text is described in this section, although the screen display is often all you need to understand how to set the options.

When you first power on the computer, the BIOS is immediately activated.

While the BIOS is in control, the Setup program can be activated in one of two ways:

1. By pressing <F2> immediately after turning the system on, or
2. When the message **Press the <F2> key to enter Setup** appears briefly at the bottom of the screen during the POST, press the <F2> key to activate the main SETUP menu:

Main BIOS Setup

All Main Setup options are described in this section.

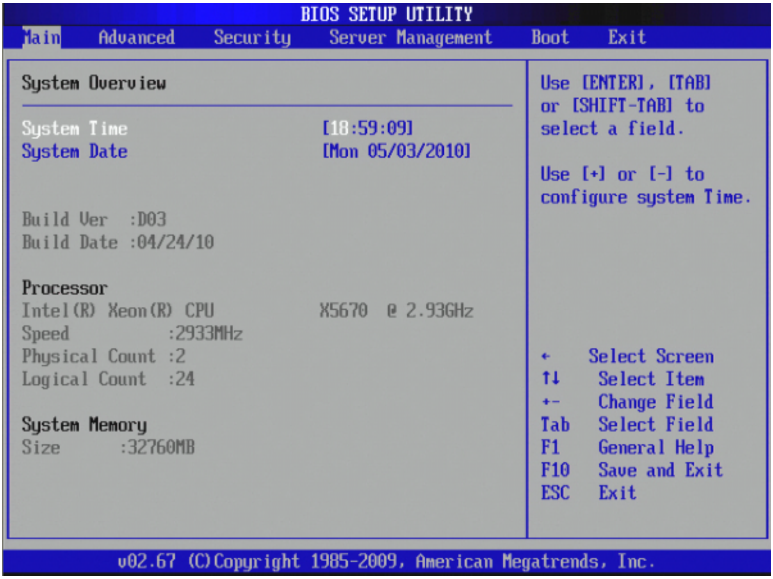
Use the UP/DOWN arrow keys to move among the different settings in each menu. Use the LEFT/RIGHT arrow keys to change the options for each setting.

Press the <ESC> key to exit the CMOS SETUP menu. The next section describes in detail how to navigate through the menus.

Items that use sub-menus are indicated with the ▶ icon. With the item highlighted, press the <ENTER> key to access the submenu.

Menu options found in the MAIN BIOS SETUP menu are shown in Figure 3-109 and described thereafter.

Figure 3-109. Main Setup Menu Screen



```
                          BIOS SETUP UTILITY
 Main    Advanced   Security   Server Management   Boot   Exit

 System Overview                                Use [ENTER], [TAB]
                                                or [SHIFT-TAB] to
 System Time                [18:59:09]          select a field.
 System Date                [Mon 05/03/2010]
                                                Use [+] or [-] to
                                                configure system Time.
 Build Ver  :D03
 Build Date :04/24/10

 Processor
 Intel(R) Xeon(R) CPU       X5670  @ 2.93GHz
 Speed          :2933MHz
 Physical Count :2                              ←     Select Screen
 Logical Count  :24                             ↑↓    Select Item
                                                +-    Change Field
 System Memory                                  Tab   Select Field
 Size        :32760MB                           F1    General Help
                                                F10   Save and Exit
                                                ESC   Exit

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```

System Overview

System Time/System Date

Use this option to change the system time and date. Highlight System Time or System Date using the arrow keys. Enter new values using the keyboard. Press the <Tab> key or the arrow keys to move between fields.

The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format. (Note: The time is in the 24-hour format. For example, 5:30 P.M. appears as 17:30:00.)

Build Ver: This item displays the BIOS revision used in your system.

Build Date: This item displays the date this BIOS was completed.

Processor

The BIOS will automatically display the status of the processor used in your system and indicate the CPU type used.

Speed: This item displays the speed of the CPU detected by the BIOS.

Physical Count: This item displays the number of processors installed in your system as detected by the BIOS.

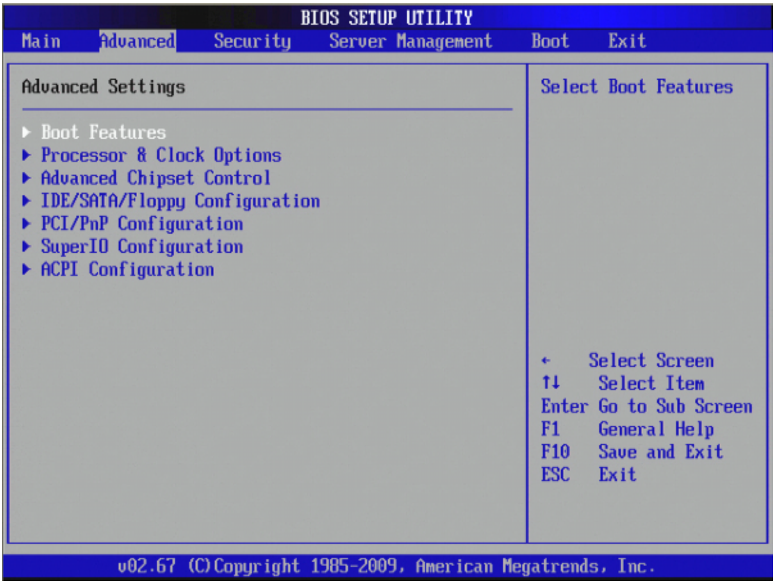
Logical Count: This item displays the number of CPU cores installed in your system as detected by the BIOS.

System Memory

This displays the size of memory available in the system as detected by the BIOS.

Advanced Settings

Figure 3-110. Advanced Settings Menu



Advanced Settings

- ▶ Boot Features
- ▶ Processor & Clock Options
- ▶ Advanced Chipset Control
- ▶ IDE/SATA/Floppy Configuration
- ▶ PCI/PnP Configuration
- ▶ SuperIO Configuration
- ▶ ACPI Configuration

Select Boot Features

← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit

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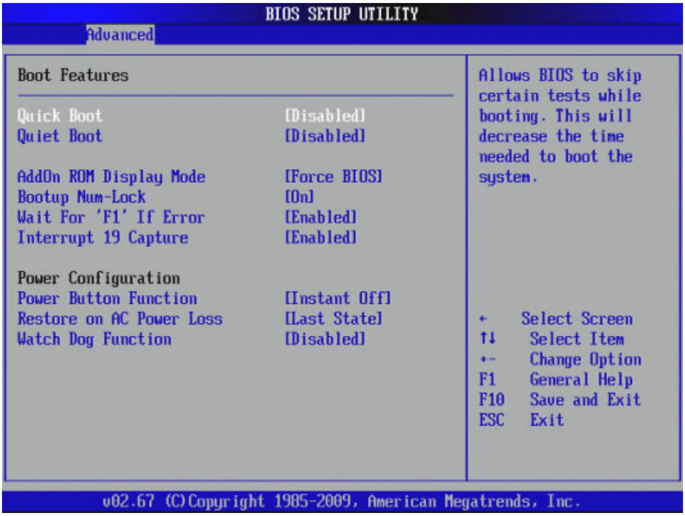
Choose **Advanced** from the BIOS Setup Utility main menu with the arrow keys to display the ADVANCED SETUP menu (Figure 3-110).

The items with a triangle beside them are sub-menus that can be accessed by highlighting the item and pressing <ENTER>.

Boot Features

Figure 3-111. Boot Features



BIOS SETUP UTILITY
Advanced

Boot Features

Quick Boot	[Disabled]
Quiet Boot	[Disabled]
AddOn ROM Display Mode	[Force BIOS]
Bootup Num-Lock	[On]
Wait For 'F1' If Error	[Enabled]
Interrupt 19 Capture	[Enabled]

Power Configuration

Power Button Function	[Instant Off]
Restore on AC Power Loss	[Last State]
Watch Dog Function	[Disabled]

Allows BIOS to skip certain tests while booting. This will decrease the time needed to boot the system.

← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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Quick Boot: Skip certain tests during POST to reduce the time needed for system boot.

Quiet Boot: Allows the bootup screen options to be modified between POST messages or the OEM logo. Select **Disabled** to display the POST messages. Select **Enabled** to display the OEM logo instead of the normal POST messages.

AddOn ROM Display Mode: Sets the display mode for Option ROM.

Bootup Num-Lock: Selects the Power-on state for Numlock key.

Wait For 'F1' If Error: Forces the system to wait until the <F1> key is pressed if an error occurs.

Interrupt 19 Capture: Interrupt 19 is the software interrupt that handles the boot disk function. When this item is set to **Enabled**, the ROM BIOS of the host adaptors will capture Interrupt 19 at boot and allow the drives that are attached to these host adaptors to function as bootable disks. If this item is set to Disabled, the ROM BIOS of the host adaptors will not capture Interrupt 19, and the drives attached to these adaptors will not function as bootable devices.

Power configuration

Power Button Function: If set to Instant_Off, the system will power off immediately when you press the power button. If set to 4_Second_Override, the system will power off when you press the power button for four seconds or longer.

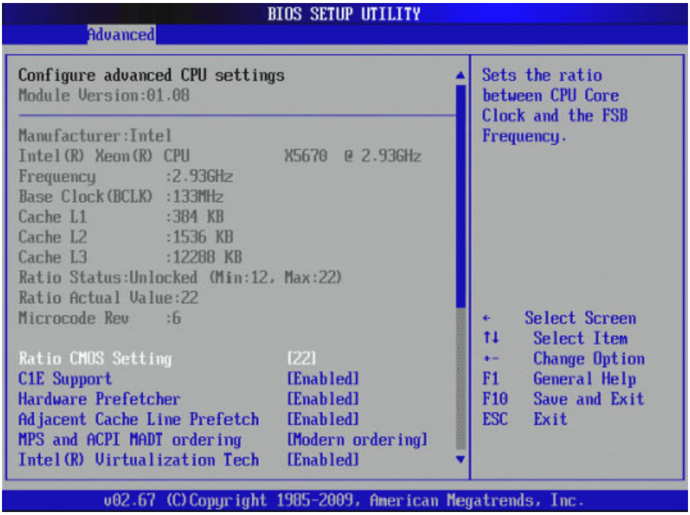
Restore on AC Power Loss: Use this feature to set the power state after a power outage. Select Power-Off for the system power to remain off after a power loss. Select Power-On for the system power to be turned on after a power loss. Select Last State to allow the system to resume its last state before a power loss.

Watch Dog Timer: If enabled, the Watch Dog Timer will allow the system to reboot when it is inactive for more than five minutes.

Processor and Clock Configuration

This submenu displays the status of the processor as detected by the BIOS, including items such as the processor manufacturer, type, frequency, CPUID, Microcode Revision, Cache L1/L2/L3, Ratio Status, and Ratio Actual Value. The submenu also allows you to configure the processor and clock settings.

Figure 3-112. Processor and Clock Configuration



```
Configure advanced CPU settings
Module Version:01.08

Manufacturer:Intel
Intel(R) Xeon(R) CPU           X5670  @ 2.93GHz
Frequency          :2.93GHz
Base Clock(BCLK)   :133MHz
Cache L1           :384 KB
Cache L2           :1536 KB
Cache L3           :12288 KB
Ratio Status:Unlocked (Min:12, Max:22)
Ratio Actual Value:22
Microcode Rev      :6

Ratio CMOS Setting              [22]
C1E Support                     [Enabled]
Hardware Prefetcher             [Enabled]
Adjacent Cache Line Prefetch    [Enabled]
MPS and ACPI MADT ordering      [Modern ordering]
Intel(R) Virtualization Tech    [Enabled]
```

Sets the ratio between CPU Core Clock and the FSB Frequency.

Ratio CMOS Setting: This option allows you to set the ratio between the CPU core clock and the FSB frequency.The default setting depends on the type of CPU installed on the motherboard. The default setting for the CPU installed in your motherboard is [18]. Press "+" or "-" on your keyboard to change this value.

Note: if an invalid ratio is entered, the BIOS will restore the setting to the previous state.

C1E Support: Select Enabled to use the feature of Enhanced Halt State. C1E significantly reduces the CPU's power consumption by reducing the CPU's clock cycle and voltage during a Halt State.

Important: The following feature is only available if supported by the processor and/or operating system.

Hardware Prefetcher: If set to **Enabled,** the hardware prefetcher will prefetch streams of data and instructions from the main memory to the L2 cache in the forward or backward manner to improve CPU performance.

Important: The following feature is only available if supported by the iprocessor and/or operating system.

Adjacent Cache Line Prefetch: The CPU fetches the cache line for 64 bytes if this option is set to **Disabled**. The CPU fetches both cache lines for 128 bytes as comprised if **Enabled**.

MPS and ACPI MADT Ordering: Allows you to configure the MPS (Multi- Processor Specifi cations) and ACPI settings for your motherboard. Select **Modern Ordering** if Windows XP or newer is used. Select Legacy Ordering if Windows 2000 or earlier is used.

Important: The following feature is only available if supported by the processor and/or operating system.

Intel Virtualization Technology: Select **Enabled** to use Virtualization Technology to allow one platform to run multiple operating systems and applications in independent partitions, creating multiple virtual systems in one physical computer.

Important: The following feature is only available if supported by the processor and/or operating system.

Execute-Disable Bit Capability: Set to **Enabled** to enable the Execute Disable Bit which will allow the processor to designate areas in the system memory where an application code can execute and where it cannot, thus preventing a worm or a virus from flooding illegal codes to overwhelm the processor or damage the system during an attack.

Important: The following feature is only available if supported by the processor and/or operating system.

Simultaneous Multi-Threading: Set to **Enabled** to use simultaneous multi-threading technology, which will result in increased CPU performance.

Active Processor Cores: Set to **Enabled** to use a processor's second core and beyond. The options are All, 1 and 2.

Intel EIST Technology: EIST (Enhanced Intel SpeedStep Technology) allows the system to automatically adjust processor voltage and core frequency in an effort to reduce power consumption and heat dissipation.

Please refer to Intel’s web site for detailed information. The options are Disable (Disable GV3) and Enable (Enable GV3).

Intel® Turbo Boost (Available when Intel® EIST Technology is enabled): Select **Enabled** to use the Turbo Mode to boost system performance.

Performance/Watt Select: When selected the "Power Optimized" (Turbo Boost engages after p) state is sustained for more than 2 seconds. In the default setting "Traditional", Turbo Boost engages even for a P0 state of less than 2 seconds.

Intel C-STATE Tech: If **Enabled**, C-State is set by the system automatically to either C2, C3 or C4.

C3 State: This feature allows the user to decide how the onboard 5500 Series processor will act at C3 State.

C6 State: This feature allows the user to decide how the onboard 5500 Series processor will act at C6 State.

C-State package limit setting: If set to **Auto,** the BIOS will automatically set the limit on the C-State package register.

C1 Auto Demotion: When **Enabled,** the CPU will conditionally demote C3, C6 or C7 requests to C1 based on un-core auto-demote information.

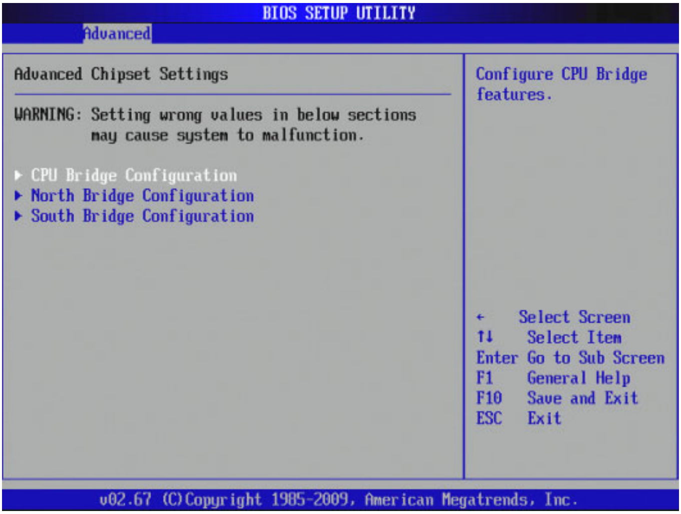
C3 Auto Demotion: When **Enabled,** the CPU will conditionally demote C6 or C7 requests to C3 based on un-core auto-demote information.

Clock Spread Spectrum: Select **Enable** to use the feature of Clock Spectrum, which will allow the BIOS to monitor and attempt to reduce the level of Electromagnetic Interference caused by the components whenever needed.

Advanced Chipset Control

The items included in the Advanced Settings submenu are listed below:

Figure 3-113. Advanced Chipset Control



```
                          BIOS SETUP UTILITY
       Advanced
Advanced Chipset Settings                        Configure CPU Bridge
                                                 features.
WARNING: Setting wrong values in below sections
         may cause system to malfunction.

▶ CPU Bridge Configuration
▶ North Bridge Configuration
▶ South Bridge Configuration

                                                 ←     Select Screen
                                                 ↑↓    Select Item
                                                 Enter Go to Sub Screen
                                                 F1    General Help
                                                 F10   Save and Exit
                                                 ESC   Exit

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```
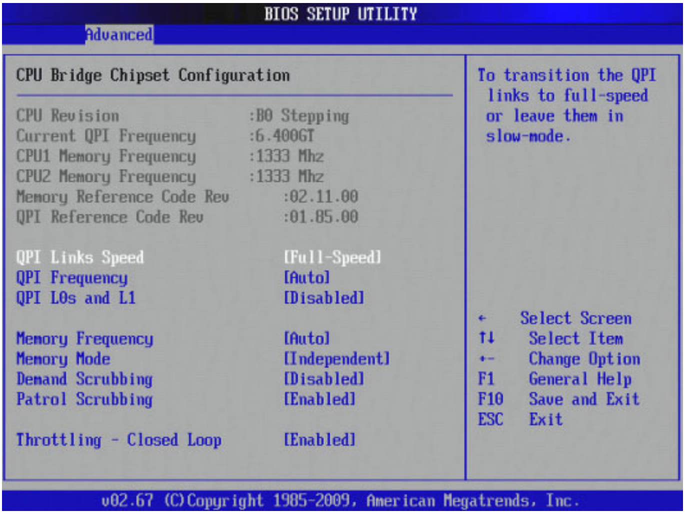

CPU Bridge configuration

Figure 3-114. CPU Bridge Configuration



```
                              BIOS SETUP UTILITY
           Advanced
 CPU Bridge Chipset Configuration                        To transition the QPI
                                                          links to full-speed
 CPU Revision                 :B0 Stepping                or leave them in
 Current QPI Frequency        :6.400GT                    slow-mode.
 CPU1 Memory Frequency        :1333 Mhz
 CPU2 Memory Frequency        :1333 Mhz
 Memory Reference Code Rev        :02.11.00
 QPI Reference Code Rev           :01.05.00

 QPI Links Speed                  [Full-Speed]
 QPI Frequency                    [Auto]
 QPI L0s and L1                   [Disabled]
                                                         ←     Select Screen
 Memory Frequency                 [Auto]                 ↑↓     Select Item
 Memory Mode                      [Independent]          +-     Change Option
 Demand Scrubbing                 [Disabled]             F1     General Help
 Patrol Scrubbing                 [Enabled]              F10    Save and Exit
                                                         ESC    Exit
 Throttling - Closed Loop         [Enabled]

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```

QPI Links Speed: This feature selects QPI data transfer speed.

Important: The following feature is only available when QPI Links Speed is set to Full Speed.

QPI Frequency: This selects the desired QPI frequency.

QPI L0s and L1: This enables the QPI power state to low power. L0s and L1 are automatically selected by the motherboard.

Memory Frequency: This feature enables you to force a DDR3 frequency slower than what the system has detected.

Memory Mode: Set the memory mode.

- Independent - All DIMMs are available to the operating system.
- Channel Mirror - The motherboard maintains two identical copies of all data in memory for redundancy.
- Lockstep - The motherboard uses two areas of memory to run the same set of operations in parallel.

Demand Scrubbing: A memory error-correction scheme where the processor writes corrected data back into the memory block from where it was read by the processor.

Patrol Scrubbing: A memory error-correction scheme that works in the background looking for and correcting resident errors.

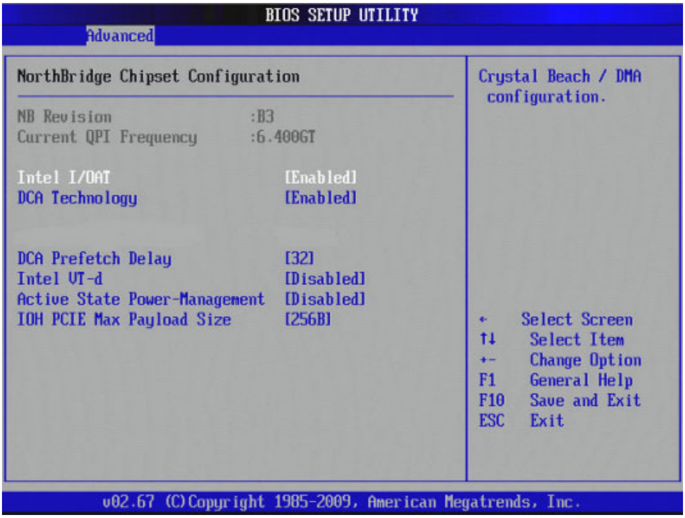
Throttling - Closed Loop/Throttling - Open Loop: Throttling improves reliability and reduces power in the processor by automatic voltage control during processor idle states. If **Enabled,** the following items will appear:

- Hysteresis Temperature (For Closed Loop only) - Temperature Hysteresis is the temperature lag (in degrees Celsius) after the set DIMM temperature threshold is reached before Closed Loop Throttling begins.
- Guardband Temperature (For the Closed Loop only) - This is the temperature which applies to the DIMM temperature threshold. Steps are in 0.5 °C increments. The default is [006]. Press "+" or "-" on your keyboard to change this value.
- Inlet Temperature - This is the temperature detected at the chassis inlet. Steps are in 0.5 °C increments. The default is [070]. Press "+" or "-" on your keyboard to change this value.
- Temperature Rise - This is the temperature rise to the DIMM thermal zone. Steps are in 0.5 °C increments. The default is [020]. Press "+" or "-" on your keyboard to change this value.
- Air Flow - This is the air flow speed to the DIMM modules. Each step is one mm/sec. The default is [1500]. Press "+" or "-" on your keyboard to change this value.
- Altitude - This feature defines how many meters above or below sea level the system is located.
- DIMM Pitch - This is the physical space between each DIMM module. Each step is 1/1000 of an inch. The default is [400]. Press "+" or "-" on your keyboard to change this value.

NorthBridge configuration

This feature allows you to configure the settings for the Intel NorthBridge chip.

Figure 3-115. NorthBridge configuration



```
NorthBridge Chipset Configuration          Crystal Beach / DMA
                                            configuration.
NB Revision                :B3
Current QPI Frequency      :6.400GT

Intel I/OAT                    [Enabled]
DCA Technology                 [Enabled]


DCA Prefetch Delay             [32]
Intel VT-d                     [Disabled]
Active State Power-Management  [Disabled]
IOH PCIE Max Payload Size      [256B]          ←    Select Screen
                                               ↑↓    Select Item
                                               +-    Change Option
                                               F1    General Help
                                               F10   Save and Exit
                                               ESC   Exit

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```

Intel I/OAT: Significantly reduces CPU overhead by leveraging CPU architectural improvements, freeing resources for other tasks.

DCA Technology: Uses Intel's DCA (Direct Cache Access) Technology to enhance data transfer efficiency.

DCA Prefetch Delay: Used with TOE components to prefetch data in order to shorten execution cycles and maximize data processing effi ciency. Prefetching too frequently can saturate the cache directory and delay necessary cache accesses. This feature reduces or increases the frequency the system prefetches data.

Intel VT-d: Select **Enabled** to enable Intel Virtualization Technology support for Direct I/O VT-d by reporting the I/O device assignments to VMM through the DMAR ACPI Tables. This feature offers fully-protected I/O resource-sharing across the Intel platforms, providing you with greater reliability, security and availability in networking and data-sharing.

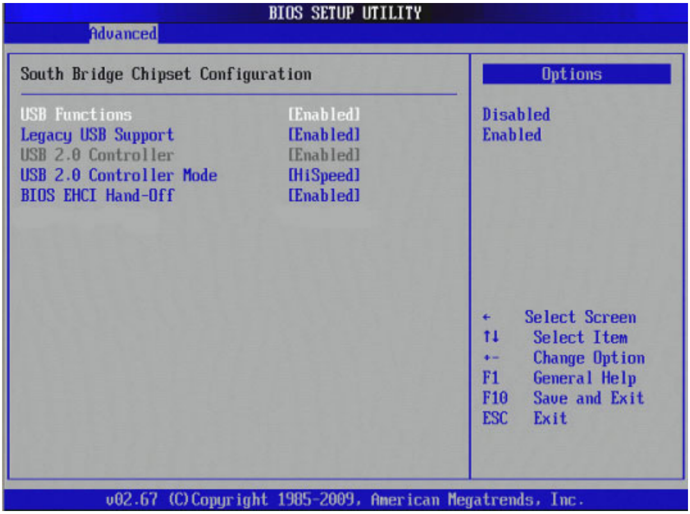
Active State Power-Management: Uses power management for signal transactions between the PCI Express L0 and L1 Links. Select Enabled to configure PCI Express L0 and L1 Link power states.

IOH PCIE Max Payload Size: Some add-on cards perform faster with the coalesce feature, which limits the payload size to 128 MB. Others perform better with a payload size of 256 MB, which inhibits the coalesce feature. Please refer to your add-on card user guide for the desired setting.

SouthBridge configuration

This feature allows you to configure the settings for the Intel ICH SouthBridge chipset.

Figure 3-116. SouthBridge configuration



BIOS SETUP UTILITY
Advanced
Options
Disabled
Enabled
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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```
South Bridge Chipset Configuration

USB Functions                   [Enabled]
Legacy USB Support              [Enabled]
USB 2.0 Controller              [Enabled]
USB 2.0 Controller Mode         [HiSpeed]
BIOS EHCI Hand-Off              [Enabled]
```

USB Functions: This feature allows you to decide how many onboard USB ports to enable.

Legacy USB Support: Select **Enabled** to use Legacy USB devices. If set to Auto, legacy USB support will be automatically enabled if a legacy USB device is installed on the motherboard.

Note: Only available when USB Functions is set to Enabled.

USB 2.0 Controller: Select Enabled to activate the onboard USB 2.0 controller.

Note: Only available when USB Functions is set to Disabled. Otherwise, this item will be set to Enabled by the BIOS.

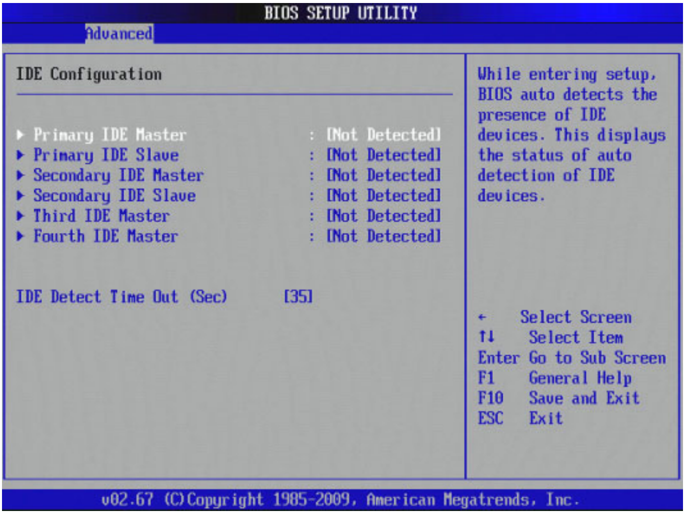
USB 2.0 Controller Mode: This setting allows you to select the USB 2.0 Controller mode.

BIOS EHCI Hand-Off: Enable or disable BIOS Enhanced Host Controller Interface support to provide a workaround solution for an operating system that does not have EHCI Hand-Off support. When enabled, the EHCI Interface will be changed from BIOS-controlled to OS-controlled.

IDE/SATA configuration

When this submenu is selected, the BIOS automatically detects the presence of the IDE devices and displays the following items:

Figure 3-117. IDE/SATA configuration



```
                          BIOS SETUP UTILITY
            Advanced
 IDE Configuration                                 While entering setup,
                                                   BIOS auto detects the
 ▶ Primary IDE Master          : [Not Detected]    presence of IDE
 ▶ Primary IDE Slave           : [Not Detected]    devices. This displays
 ▶ Secondary IDE Master        : [Not Detected]    the status of auto
 ▶ Secondary IDE Slave         : [Not Detected]    detection of IDE
 ▶ Third IDE Master            : [Not Detected]    devices.
 ▶ Fourth IDE Master           : [Not Detected]

 IDE Detect Time Out (Sec)   [35]
                                                   ←     Select Screen
                                                   ↑↓     Select Item
                                                   Enter Go to Sub Screen
                                                   F1     General Help
                                                   F10    Save and Exit
                                                   ESC    Exit
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```

SATA#1 configuration: If **Compatible** is selected, it sets SATA#1 to legacy compatibility mode, while selecting **Enhanced** sets SATA#1 to native SATA mode.

- Configure SATA#1 as - This feature allows you to select the drive type for SATA#1. The options are IDE, RAID and AHCI.

- ICH RAID Code Base - Select Intel or Adaptec to launch the appropriate SATA RAID firmware to configure SATA RAID.

SATA#2 configuration: Selecting **Enhanced** will set SATA#2 to native SATA mode.

Primary IDE Master/Slave, Secondary IDE Master/Slave, Third IDE Master, and Fourth IDE Master: These settings allow you to set the parameters of the IDE slots. Press <**Enter**> to activate the submenu screen for detailed options of these items. Set the configurations accordingly. Items included in the submenu are:

- Type - Select the type of device connected to the system.
- LBA/Large Mode - LBA (Logical Block Addressing) is a method of addressing data on a disk drive. In the LBA mode, the maximum drivecapacity is 137 GB. For drive capacities over 137 GB, your system must be equipped with a 48-bit LBA mode addressing. If not, contact your manufacturer or install an ATA/133 IDE controller card that supports 48-bit LBA mode.
- Block (Multi-Sector Transfer) - Block Mode boosts the IDE drive performance by increasing the amount of data transferred. Only 512 bytes of data can be transferred per interrupt if Block Mode is not used. Block Mode allows transfers of up to 64 KB per interrupt. Select Disabled to allow data to be transferred from and to the device one sector at a time. Select Auto to allow data transfer from and to the device occur multiple sectors at a time if the device supports it.
- PIO Mode - The IDE PIO (Programmable I/O) Mode programs timing cycles between the IDE drive and the programmable IDE controller. As the PIO mode increases, the cycle time decreases.

Select	Description
Auto	Automatically detect the PIO mode. Use this value if the IDE disk drive support cannot be determined.
0	Use PIO mode 0. It has a data transfer rate of 3.3 MBs.
1	Use PIO mode 1. It has a data transfer rate of 5.2 MBs.
2	Use PIO mode 2. It has a data transfer rate of 8.3 MBs.
3	Use PIO mode 3. It has a data transfer rate of 11.1 MBs.

Select	Description
4	Use PIO mode 4. It has a data transfer bandwidth of 32 bits.
Enabled	Enable 32-bit data transfer.

- DMA Mode

Select	Description
Auto	Automatically detect IDE DMA mode when the IDE disk drive support cannot be determined.
SWDMA0	Use Single Word DMA mode 0. It has a data transfer rate of 2.1 MBs.
SWDMA2	Use Single Word DMA mode 2. It has a data transfer rate of 8.3 MBs.
MWDMA0	Use Multi Word DMA mode 0. It has a data transfer rate of 4.2 MBs.
MWDMA1	Use Multi Word DMA mode 1. It has a data transfer rate of 13.3 MBs.
MWDMA2	Use Multi-Word DMA mode 2. It has a data transfer rate of 16.6 MBs.
UDMA0	Use Ultra DMA mode 0. It has a data transfer rate of 16.6 MBs. It has the same transfer rate as PIO mode 4 and Multi Word DMA mode 2.
UDMA1	Use Ultra DMA mode 1. It has a data transfer rate of 25 MBs.
UDMA2	Use Ultra DMA mode 2. It has a data transfer rate of 33.3 MBs.
UDMA3	Use Ultra DMA mode 3. It has a data transfer rate of 66.6 MBs.
UDMA4	Use Ultra DMA mode 4. It has a data transfer rate of 100 MBs.
UDMA5	Use Ultra DMA mode 5. It has a data transfer rate of 133 MBs.
UDMA6	Use Ultra DMA mode 6. It has a data transfer rate of 133 MBs.

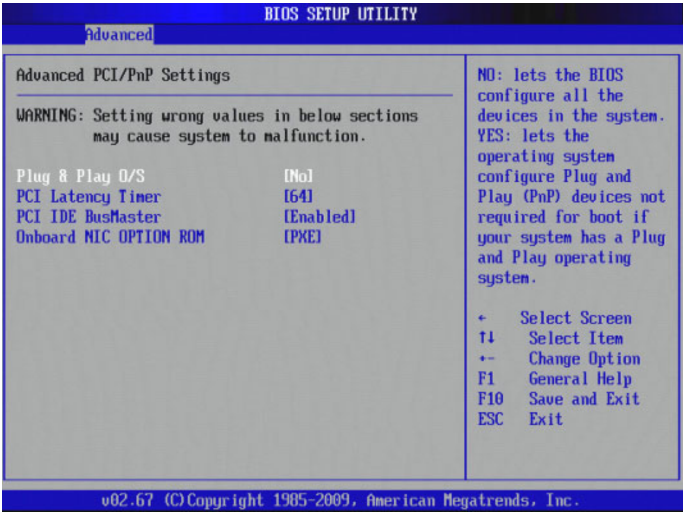
- S.M.A.R.T. For Hard disk drives - Self-Monitoring Analysis and Reporting Technology (SMART) can help predict impending drive failures. Select Auto to allow the BIOS to automatically detect hard disk drive support.

- 32Bit Data Transfer - Select Enable to enable the function of 32-bit IDE data transfer.

IDE Detect Timeout (sec): Use this feature to set the time-out value for the BIOS to detect the ATA, ATAPI devices installed in the system.

PCI/PnP configuration

Figure 3-118. PCI/PnP configuration



```
                         BIOS SETUP UTILITY
          Advanced
 Advanced PCI/PnP Settings                       NO: lets the BIOS
                                                 configure all the
 WARNING: Setting wrong values in below sections devices in the system.
          may cause system to malfunction.       YES: lets the
                                                 operating system
 Plug & Play O/S               [No]              configure Plug and
 PCI Latency Timer             [64]              Play (PnP) devices not
 PCI IDE BusMaster             [Enabled]         required for boot if
 Onboard NIC OPTION ROM        [PXE]             your system has a Plug
                                                 and Play operating
                                                 system.

                                                 ←    Select Screen
                                                 ↑↓   Select Item
                                                 +-   Change Option
                                                 F1   General Help
                                                 F10  Save and Exit
                                                 ESC  Exit

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```

Plug & Play OS Selecting: Yes allows the OS to configure Plug & Play devices. (This is not required for system boot if your system has an oerating system that supports Plug & Play.) Select **No** to allow the BIOS to configure all devices in the system.

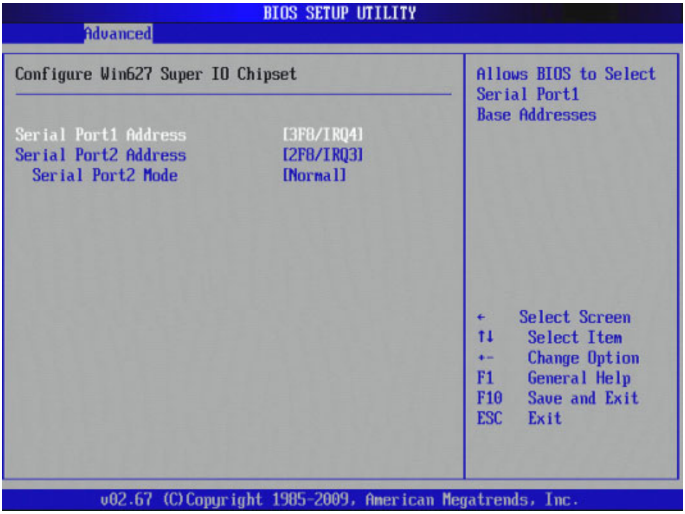
PCI Latency Timer: This feature sets the latency timer of each PCI device installed on a PCI bus.

PCI IDE BusMaster: When Enabled, the BIOS uses PCI bus mastering for reading/writing to IDE drives.

Onboard NIC Option ROM : Select **iSCSI** to use the iSCSI Option ROM to boot the computing using a network device. Select **PXE** to use the PXE Option ROM to boot the computer using a network device.

Super IO Device configuration

Figure 3-119. Super IO Device configuration


BIOS SETUP UTILITY
Advanced
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit

Configure Win627 Super IO Chipset

Serial Port1 Address [3F8/IRQ4]
Serial Port2 Address [2F8/IRQ3]
Serial Port2 Mode [Normal]

Allows BIOS to Select Serial Port1 Base Addresses

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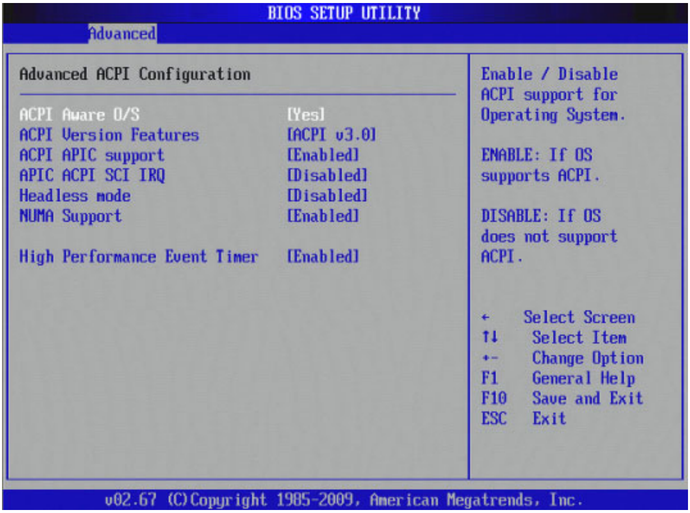
Serial Port1 Address/ Serial Port2 Address: This option specifies the base I/O port address and the Interrupt Request address of Serial Port 1 and Serial Port 2. Select **Disabled** to prevent the serial port from accessing any system resources. When this option is set to Disabled, the serial port physically becomes unavailable. Select 3F8/IRQ4 to allow the serial port to use 3F8 as its I/O port address and IRQ 4 for the interrupt address.

ACPI configuration

Figure 3-120. ACPI configuration



```
                         BIOS SETUP UTILITY
           Advanced
 Advanced ACPI Configuration                      Enable / Disable
                                                  ACPI support for
 ACPI Aware O/S                 [Yes]             Operating System.
 ACPI Version Features          [ACPI v3.0]
 ACPI APIC support              [Enabled]         ENABLE: If OS
 APIC ACPI SCI IRQ              [Disabled]        supports ACPI.
 Headless mode                  [Disabled]
 NUMA Support                   [Enabled]         DISABLE: If OS
                                                  does not support
 High Performance Event Timer   [Enabled]         ACPI.

                                                  ←    Select Screen
                                                  ↑↓    Select Item
                                                  +-    Change Option
                                                  F1    General Help
                                                  F10   Save and Exit
                                                  ESC   Exit

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```

Use this feature to configure Advanced configuration and Power Interface (ACPI) power management settings for your system.

ACPI Aware O/S: Select **Yes** to enable ACPI support for an operating system that supports ACPI. Select **No** to disable ACPI support for an OS that does not support ACPI.

ACPI Version Features: The options are ACPI v1.0, ACPI v2.0 and ACPI v3.0. Please refer to ACPI's website for further explanation: http://www.acpi.info/.

ACPI APIC Support: Select **Enabled** to include the ACPI APIC Table Pointer in the RSDT pointer list.

Note: Only available when ACPI is enabled on an ACPI-aware operating system.

APIC ACPI SCI IRQ: When this item is set to **Enabled,** APIC ACPI SCI IRQ is supported by the system.

Headless Mode: Enables the system to function without a keyboard, monitor, or mouse attached.

Note: Only available when ACPI is enabled on an ACPI-aware operating system.

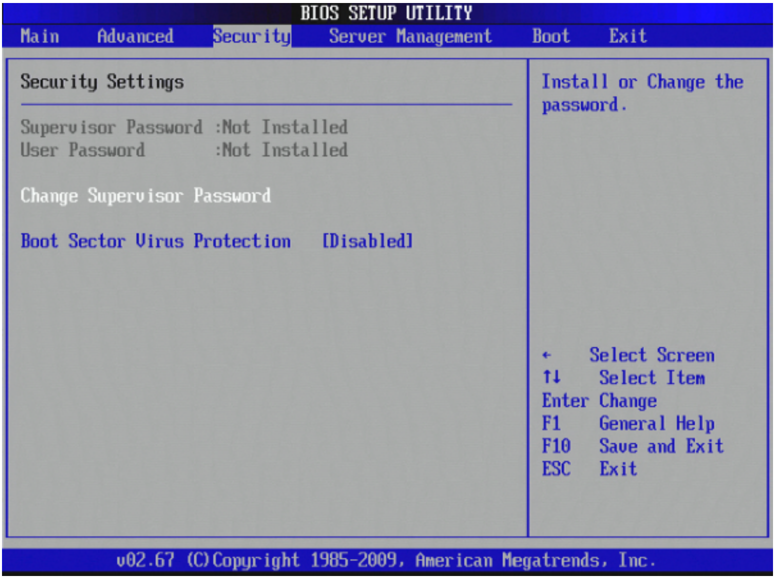
NUMA Support: Uses Non-Uniform Memory Access to improve CPU performance.

High Performance Event Timer: Select **Enabled** to activate the High Performance Event Timer (HPET) that produces periodic interrupts at a much higher frequency than a Real-time Clock (RTC) does in synchronizing multimedia streams, providing smooth playback and reducing the dependency on other timestamp calculation devices, such as an x86 RDTSC Instruction embedded in the CPU. The High Performance Event Timer is used to replace the 8254 Programmable Interval Timer.

Security

The BIOS provides a Supervisor and a User password. If you use both passwords, the Supervisor password must be set first.

Figure 3-121. Security Setup Menu


BIOS SETUP UTILITY
Main
Advanced
Security
Server Management
Boot
Exit
← Select Screen
↑↓ Select Item
Enter Change
F1 General Help
F10 Save and Exit
ESC Exit

Security Settings

Supervisor Password :Not Installed
User Password :Not Installed

Change Supervisor Password

Boot Sector Virus Protection [Disabled]

Install or Change the password.

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Supervisor Password: This item indicates if a supervisor password has been entered for the system. Clear means such a password has not been used and Set means a supervisor password has been entered for the system.

User Password: This item indicates if a user password has been entered for the system. Clear means such a password has not been used and Set means a user password has been entered for the system.

Change Supervisor Password: Select this feature and press <Enter> to access the submenu, and then type in a new Supervisor Password.

User Access Level: (Available when Supervisor Password is set as above) Available options are:

- Full Access - grants full User read and write access to the Setup Utility.
- View Only - allows access to the Setup Utility but the fields cannot be changed.
- Limited - allows only limited .elfis to be changed such as Date and Time
- No Access - prevents User access to the Setup Utility.

Change User Password: Select this feature and press <**Enter**> to access the submenu , and then type in a new User Password.

Clear User Password: (Available only if User Password has been set) This item allows you to clear a user password after it has been entered.

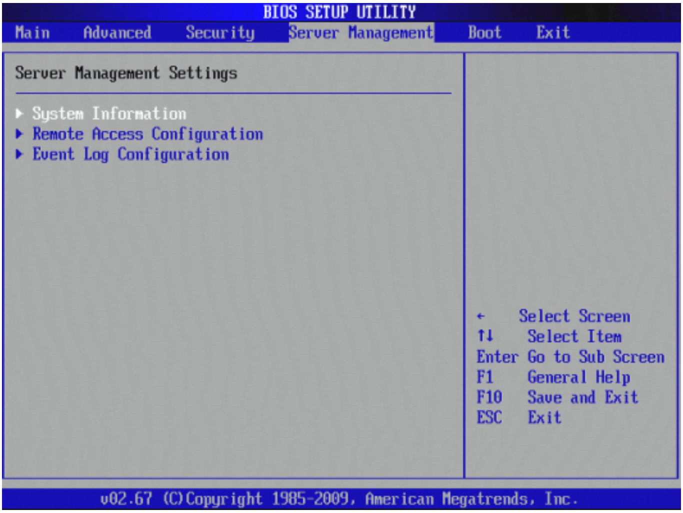
Password Check: If set to **Setup**, a password is required to enter the Setup Utility. If set to **Always,** the system will prompt for a password at bootup.

Boot Sector Virus Protection: When **Enabled,** the BIOS displays a warning when any program (or virus) issues a disk format command or attempts to write to the boot sector of the hard disk drive.

Server Management Settings

Use this feature to configure Server Management settings.

Figure 3-122. Use this feature to configure Server Management settings.



BIOS SETUP UTILITY
Main
Advanced
Security
Server Management
Boot
Exit

Server Management Settings

- ▸ System Information
- ▸ Remote Access Configuration
- ▸ Event Log Configuration

← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
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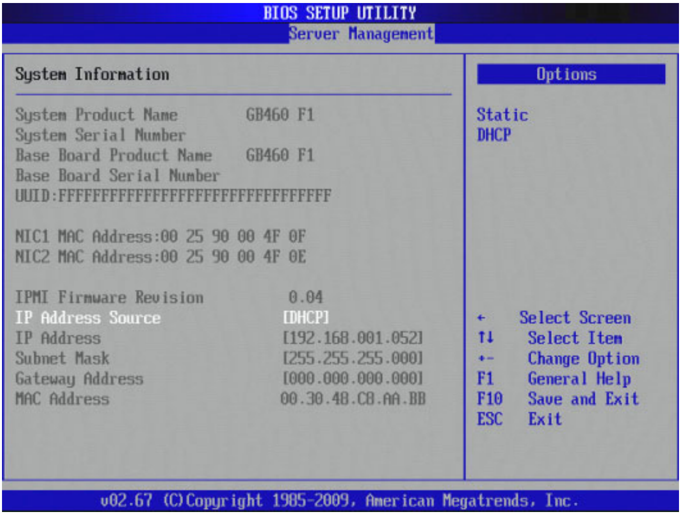
System Information

Figure 3-123. System Information



```
                         BIOS SETUP UTILITY
                           Server Management
 System Information                                  Options

 System Product Name        GB460 F1                 Static
 System Serial Number                                DHCP
 Base Board Product Name    GB460 F1
 Base Board Serial Number
 UUID:FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF

 NIC1 MAC Address:00 25 90 00 4F 0F
 NIC2 MAC Address:00 25 90 00 4F 0E

 IPMI Firmware Revision          0.04
 IP Address Source              [DHCP]               ←    Select Screen
 IP Address                     [192.168.001.052]    ↑↓    Select Item
 Subnet Mask                    [255.255.255.000]    +-    Change Option
 Gateway Address                [000.000.000.000]    F1    General Help
 MAC Address                    00.30.48.C8.AA.BB    F10   Save and Exit
                                                     ESC   Exit

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```

This submenu displays the following product information.

- System Product Name
- System Serial Number
- Base Board Product Name
- Base Board Serial Number
- UUID
- NIC1 Mac Address
- NIC2 Mac Address
- IPMI Firmware Revision

IP Address Source: Select how an IP address is assigned to a client computer or network device. Select DHCP (Dynamic Host Configuration Protocol) to allow a client (computer or device) to obtain an IP address from a DHCP server that manages a pool of IP addresses and network information on a request and grant basis. Select **Static** (Static Allocation) to allow the host server to allocate an IP address based on a table containing MAC Address/IP Address pairs that are manually entered (such as by a network administrator). Only clients with a MAC address listed in the MAC/ IP Address Table will be assigned an IP address.

IP Address: The BIOS will automatically display the IP address of the machine. This should be in decimal and in dotted quad form (i.e., 192.168.10.253). The value of each three-digit number separated by dots should not exceed 255.

Note: This feature can be changed by the user when the IP Source is set to Static.

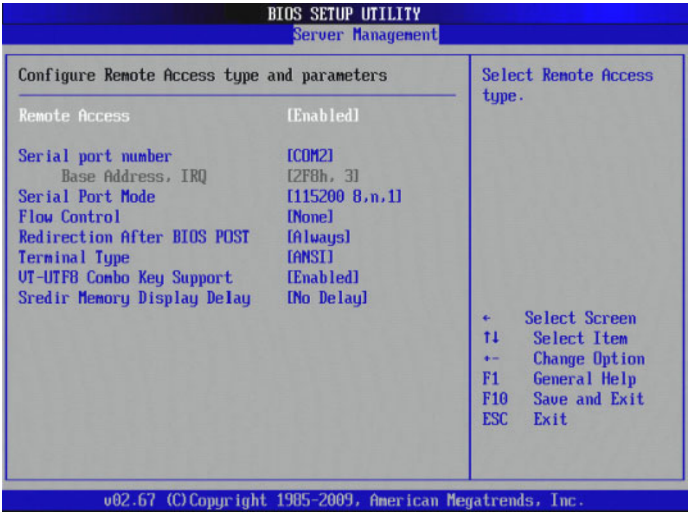
Subnet Mask: This item displays the current subnet mask setting for your IPMI connection. This should be in decimal and in dotted quad form (e.g., 192.168.10.253). The value of each three-digit number separated by dots should not exceed 255.

Acer Address: The BIOS will automatically display the Acer address of this machine. This should be in decimal and in dotted quad form (i.e., 192.168.10.253). The value of each three-digit number separated by dots should not exceed 255.

Mac Address: The BIOS will automatically enter the Mac address of this machine. Mac addresses are 6 two-digit hexadecimal numbers (Based 16, 0 to 9, A, B, C, D, E, F) separated by dots. (e.g., 00.30.48.D0.D4.60).

Remote Access Configuration

Figure 3-124. Remote Access Configuration



BIOS SETUP UTILITY
Server Management
Select Remote Access type.
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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```
Configure Remote Access type and parameters

Remote Access                     [Enabled]

Serial port number                [COM2]
     Base Address, IRQ            [2F8h, 3]
Serial Port Mode                  [115200 8,n,1]
Flow Control                      [None]
Redirection After BIOS POST       [Always]
Terminal Type                     [ANSI]
VT-UTF8 Combo Key Support         [Enabled]
Sredir Memory Display Delay       [No Delay]
```

Remote Access: This allows you to enable Remote Access support. If Remote Access is set to Enabled, the following items will be displayed:

Serial Port Number: This feature allows the user to decide which serial port to be used for Console Redirection. The options are COM 1 and COM2.

Base Address, IRQ: This item displays the base address and IRQ of the serial port used for Console Redirection.

Serial Port Mode: Allows you to set the serial port mode for Console Redirection.

Flow Control: Allows you to set the flow control for Console Redirection.

Redirection After BIOS POST: Select **Disabled** to turn off Console Redirection after POST or **Always** to keep Console Redirection active all the time after POST. Select **Boot Loader** to keep Console Redirection active during POST and Boot Loader.

Note: Some settings may not be supported by some operating systems.

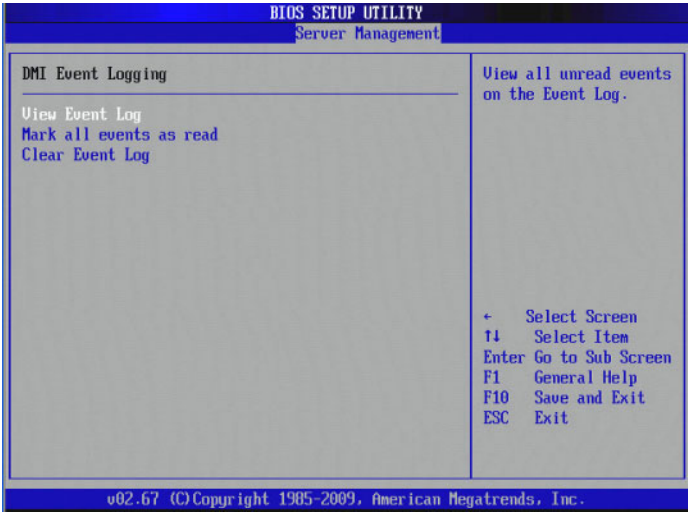
Terminal Type: Allows you to select the target terminal type for Console Redirection.

VT-UTF8 Combo Key Support: Select **Enabled** to enable VT-UTF8 Combination Key support for ANSI/VT100 terminals.

Sredir Memory Display Delay: Defines the length of time in seconds to display memory information.

Event Log Configuration

Figure 3-125. Event Log Configuration


BIOS SETUP UTILITY
Server Management
DMI Event Logging
View Event Log
Mark all events as read
Clear Event Log
← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
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View all unread events on the Event Log.

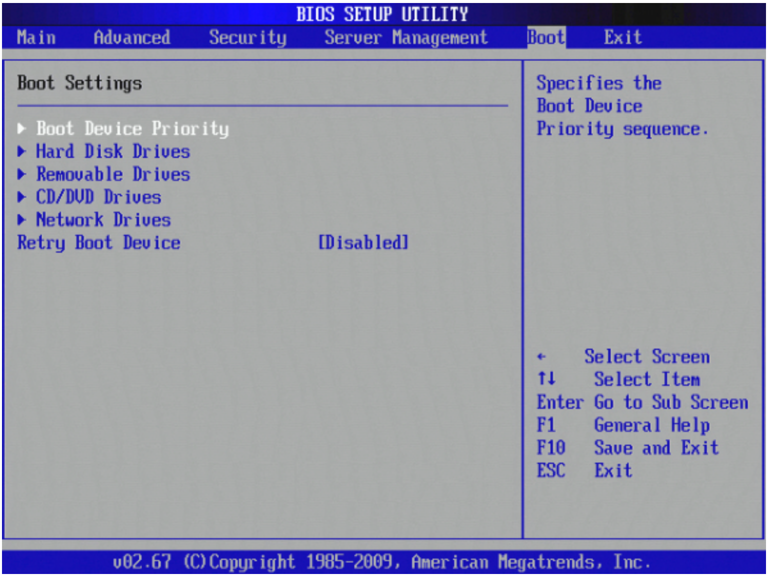
View Event Log: View the System Event Log.

Mark All Events as Read: Marks all events as read.

Clear Event Log: This option clears the Event Log memory of all messages.

Boot

Figure 3-126. Boot Setup


BIOS SETUP UTILITY
Main
Advanced
Security
Server Management
Boot
Exit

Boot Settings

- ▶ Boot Device Priority
- ▶ Hard Disk Drives
- ▶ Removable Drives
- ▶ CD/DVD Drives
- ▶ Network Drives

Retry Boot Device [Disabled]

Specifies the Boot Device Priority sequence.

← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit

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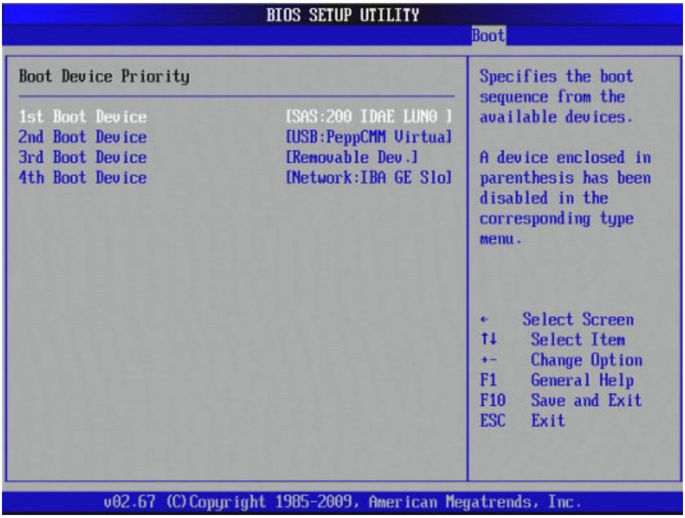
This menu allows you to configure boot settings for the system.

Boot Device Priority

This feature allows you to specify the sequence of priority for the Boot Device.

Figure 3-127. Boot Device Priority



```
                              BIOS SETUP UTILITY
                                                         Boot
Boot Device Priority                                   Specifies the boot
                                                       sequence from the
1st Boot Device               [SAS:200 IDAE LUN0 ]     available devices.
2nd Boot Device               [USB:PeppCMM Virtual]
3rd Boot Device               [Removable Dev.]         A device enclosed in
4th Boot Device               [Network:IBA GE Slo]     parenthesis has been
                                                       disabled in the
                                                       corresponding type
                                                       menu.

                                                       ←    Select Screen
                                                       ↑↓    Select Item
                                                       +-    Change Option
                                                       F1    General Help
                                                       F10   Save and Exit
                                                       ESC   Exit

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```
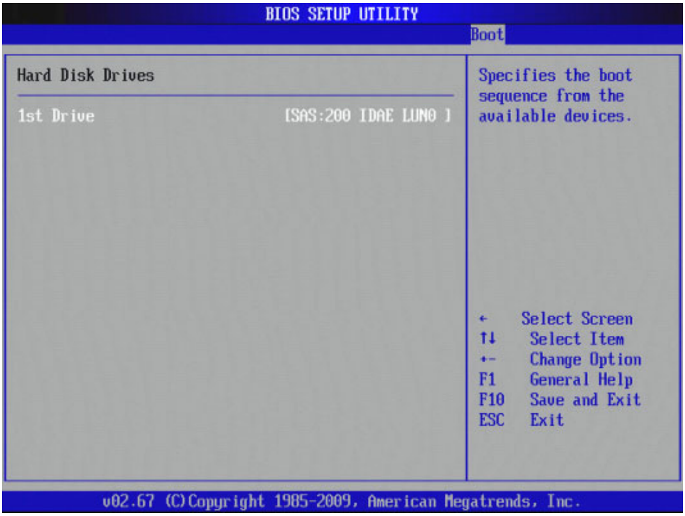

- 1st Boot Device
- 2nd Boot Device
- 3rd Boot Device
- 4th Boot Device

Hard Disk Drives

Figure 3-128. Hard Disk Drives



BIOS SETUP UTILITY
Boot
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit

Hard Disk Drives

1st Drive [SAS:200 IDAE LUN0]

Specifies the boot sequence from the available devices.

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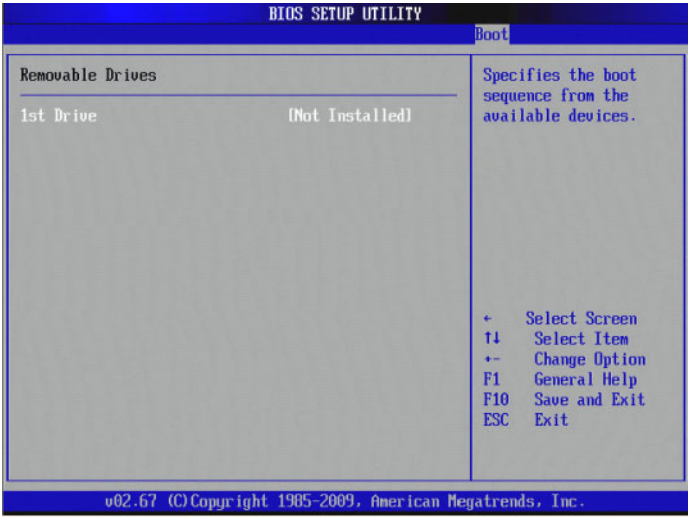
This feature allows you to specify the boot sequence from all available hard disk drives. The settings are Disabled and a list of all hard disk drives that have been detected.

- 1st Drive

Removable Drives

Figure 3-129. Removable Drives



BIOS SETUP UTILITY
Boot

Removable Drives

1st Drive [Not Installed]

Specifies the boot sequence from the available devices.

← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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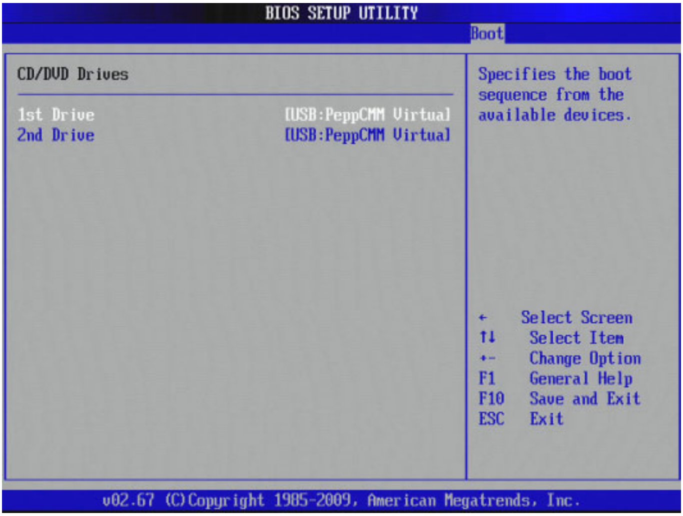
This feature allows you to specify the boot sequence from all available removable drives.

CD/DVD Drive

Figure 3-130. CD/DVD Drive



BIOS SETUP UTILITY

Boot

CD/DVD Drives

1st Drive [USB:PeppCMM Virtual]
2nd Drive [USB:PeppCMM Virtual]

Specifies the boot sequence from the available devices.

← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit

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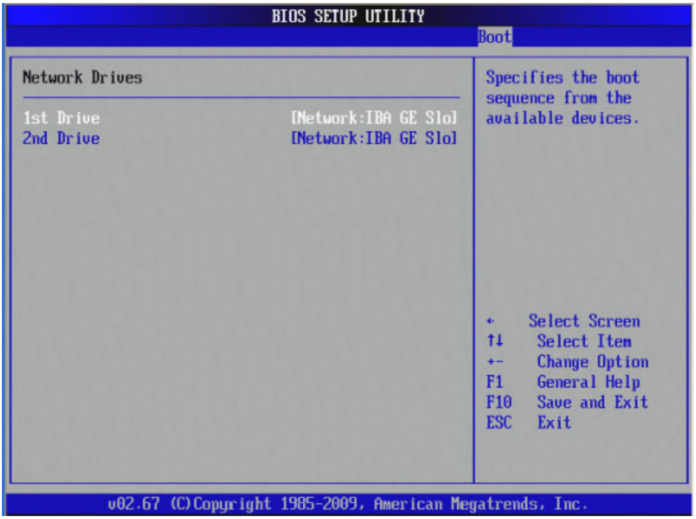
This feature allows you to specify the boot sequence from all available removable drives.

Network Drives

Figure 3-131. Network Drives

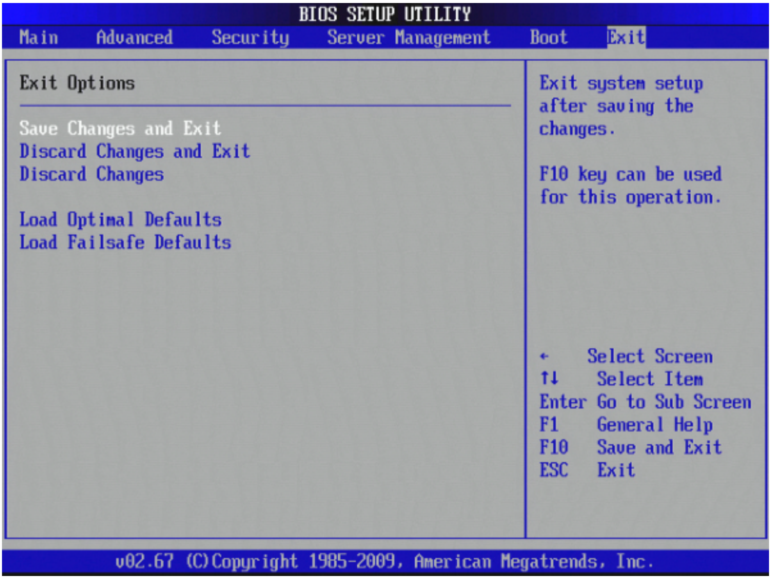


```
                         BIOS SETUP UTILITY
                                                  Boot
 Network Drives                                     Specifies the boot
                                                    sequence from the
 1st Drive                  [Network:IBA GE Slo]    available devices.
 2nd Drive                  [Network:IBA GE Slo]

                                                    ←    Select Screen
                                                    ↑↓   Select Item
                                                    +-   Change Option
                                                    F1   General Help
                                                    F10  Save and Exit
                                                    ESC  Exit

        v02.67 (C)Copyright 1985-2009, American Megatrends, Inc.
```

This feature allows you to specify the boot sequence from available network drives.

Exit Options

Figure 3-132. Exit Setup Menu


BIOS SETUP UTILITY
Main
Advanced
Security
Server Management
Boot
Exit
Exit Options
Save Changes and Exit
Discard Changes and Exit
Discard Changes
Load Optimal Defaults
Load Failsafe Defaults
← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
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Exit system setup after saving the changes.

F10 key can be used for this operation.

Save Changes and Exit: When you have completed the system configuration changes, select this option to leave the BIOS Setup Utility and reboot the computer, so the new system configuration parameters can take effect. Select **Save Changes and Exit** from the Exit menu and press <**Enter**>.

Discard Changes and Exit: Select this option to quit the BIOS Setup Utility without making any permanent changes to the system configuration, and reboot the computer. Select **Discard Changes and Exit** from the Exit menu and press <**Enter**>.

Discard Changes: Select this option and press <**Enter**> to discard all the changes and return to the BIOS Setup Utility.

Load Optimal Defaults: To set this feature, select **Load Optimal Defaults** from the Exit menu and press <**Enter**>. Then, select **OK** to allow the BIOS to automatically load optimal defaults to the BIOS settings. The Optimal settings are designed for maximum system performance, but may not work best for all computer applications.

Load Fail-Safe Defaults: To set this feature, select **Load Fail-Safe Defaults** from the Exit menu and press <**Enter**>. The Fail-Safe settings are designed for maximum system stability, but not for maximum performance.

AB460 F1 Onboard SAS RAID Configuration

This section briefly shows how to create RAID with onboard SAS RAID.

Entering onboard SAS Configuration Utility

To start the SAS Configuration Utility, press **CTRL-M** when you see the onboard SAS BIOS during POST. After POST finished, the SAS Configuration Utility will show on the screen.

Loading Factory Default Setting

1. In LSI Corp Config Utility, select **LSI SAS2008** and press **Enter.**
2. In Adapter Properties screen, move cursor to **Advanced Adapter Properties** and press **Enter.**
3. Move the cursor to **Restore Defaults.**
4. Press **ESC** to exit the menu.
5. Press **ESC** and then select **Save changes then exit this menu.**
6. Select **Exit the Configuration Utility and Reboot** to quit the utility.

Creating a RAID Volume

1. In LSI Corp Config Utility, select **LSI SAS2008** and press **Enter.**
2. In Adapter Properties screen, move cursor to **RAID Properties** and press **Enter.**
3. In Select New Volume Type screen, please select the RAID level you want to create. For this example, we create RAID 1 by selecting **Create RAID 1 Volume**.
4. In Create New Volume screen, move the cursor to **RAID Disk** column and then select the HDD desired by pressing **+** key or **Space** key.
5. The below warning message displayed. Please press **+** key or **Space** key to add the HDD to the RAID volume.

WARNING! Data was found on the selected disk, this data will be lost when the volume is created!

6. Return to Create New Volume screen.
7. Move the cursor to **RAID Disk** column and then select another HDD desired for the RAID volume.
8. Press **+** or **Space** key to add the HDD.

9 The below warning message displayed. Please press **+** key or **Space** key to add the HDD to the RAID volume.

WARNING! Data was found on the selected disk, this data will be lost when the volume is created!

10 Press **C** to commit the changes.

11 Select **Save changes then exit this menu** to create the volume.

12 Select **Exit the Configuration Utility and Reboot** to quit the utility.

Initialing a RAID Volume

During onboard SAS RAID volume creation process, the onboard SAS RAID volume will be automatically initiated once the onboard SAS RAID volume has been created.

Assigning a Hot Spare Disk

1 In LSI Corp Config Utility, select **LSI SAS2008** and press **Enter.**

2 In Adapter Properties screen, move cursor to **RAID Properties** and press **Enter.**

3 In Select New Volume Type screen, please select **View Existing Volume**.

4 In View Volume screen, select **Manage Volume.**

5 In Manage Volume screen, select **Manage Hot Spares.**

6 Move the cursor to the **RAID Disk** column and select a HDD desired. To add the HDD to the volume as hot spare, please change the No to Yes by pressing the **+** key or **Space** key.

7 Press **C** to commit the changes.

8 Select **Save changes then exit this menu** to create the volume.

9 Select **Exit the Configuration Utility and Reboot** to quit the utility.

AB2x280 F1

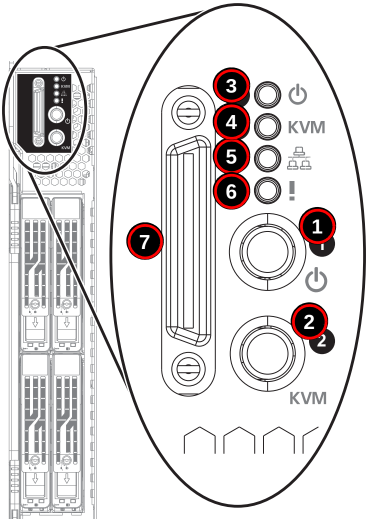
Internal and External Structure

This chapter describes the AB2x280 F1 blade unit. Installation and maintenance should be performed by experienced technicians only.

Control Panel

Each blade has a similar control panel (Figure 3-103) with power on/off button, a KVM connector, a KVM button and four LEDs on the top front of the unit. The numbers mentioned in Figure 3-103are described in the following table.

Figure 3-133. Blade Control Panel



Item	Function	State	Description
1	Power Button	N/A	Turns blade module on and off

Item	Function	State	Description
2	KVM Button	N/A	Initiates KVM function
3	Power LED	Green	Indicates power status “On”
		Orange	Indicates power status “Off” (with power cables plugged in)
4	KVM/ID LED	Blue	Indicates KVM being utilized on blade unit
		Flashing Blue	Indicates ID activated on blade module
5	Network/ IB LED	Flashing Green	Indicates network activity over LAN
		Flashing Orange	Indicates network activity over InfiniBand module
6	System Fault LED	Red	Indicates a memory error, overheat, VGA error or any error that prevents booting
7	KVM Connector	N/A	Connector for KVM cable

Power Button

Each blade has its own power button so that individual blade units within the enclosure may be turned on or off independently of the others. Press the power button (#1) to turn on the blade server. The power LED (#3) will turn green. To turn off, press and hold the power button for >4 seconds and the power LED will turn orange.

KVM Button

KVM stands for Keyboard/Video/Mouse. With KVM, a user can control multiple blades with a single keyboard/video/mouse setup. Connect your keyboard, mouse and monitor to the USB and VGA connectors on the CMM module, then push the KVM button on the control panel of the blade module you wish to access.

LED Indicators

Blade module LEDs are described below in the following table.

LED	State	Description
Power LED	Green	Power On
	Amber	Standby
	Red	Power Failure[1]
KVM/ID LED (Blue)	Steady On	Indicates that KVM has been initialized on this blade module
	Flashing	Serves as a ID indicator (the ID function is activated with a management program)
Network LED (Green)	Flashing	Flashes on and off to indicate traffic (Tx and Rx data) on the LAN connection to this blade module.
System Fault LED (Red)	Steady On	This LED illuminates red when a fatal error occurs. This may be the result of a memory error, a VGA error or any other fatal error that prevents the operating system from booting up.

[1] In the event of a power failure, the N+1 Redundant Power Supply (if included in your system's configuration) shares the system load to provide uninterrupted operation. The failed power supply should be replaced with a new one as soon as possible.

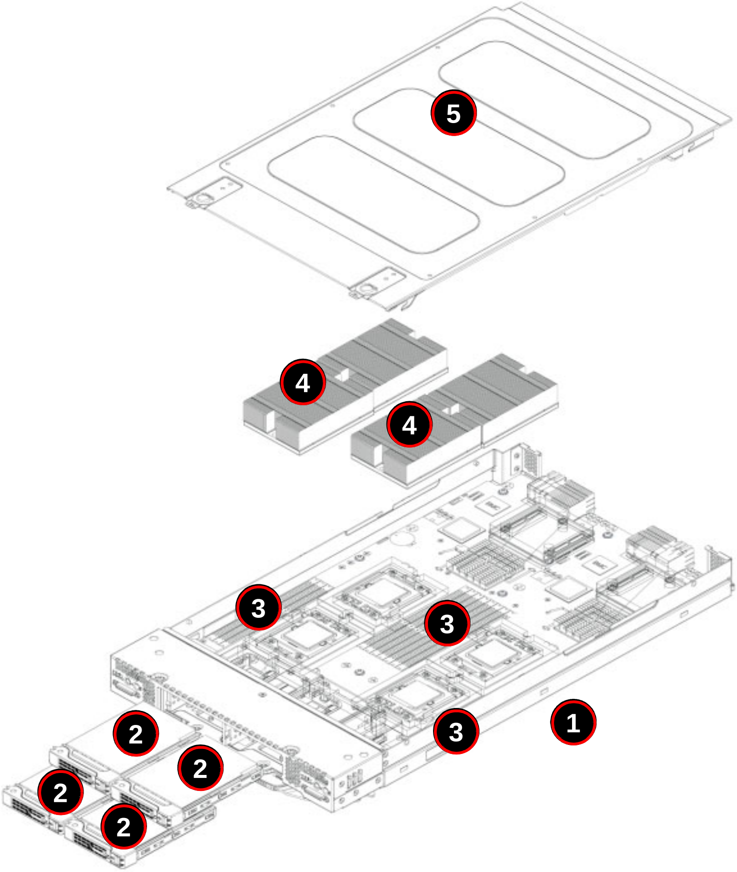
KVM Connector

Alternatively, you may connect a KVM cable (CBL-0218L, with a keyboard/video/mouse attached) to the KVM connector (#7) of the blade you wish to access. To switch to another blade, disconnect the cable then reconnect it to the new blade.

See the Acer Smart Blade Console on page 28 for further details on using the KVM function remotely.

Blade Unit Components

Figure 3-134. Exploded View of AB2x280 F1 Blade Module

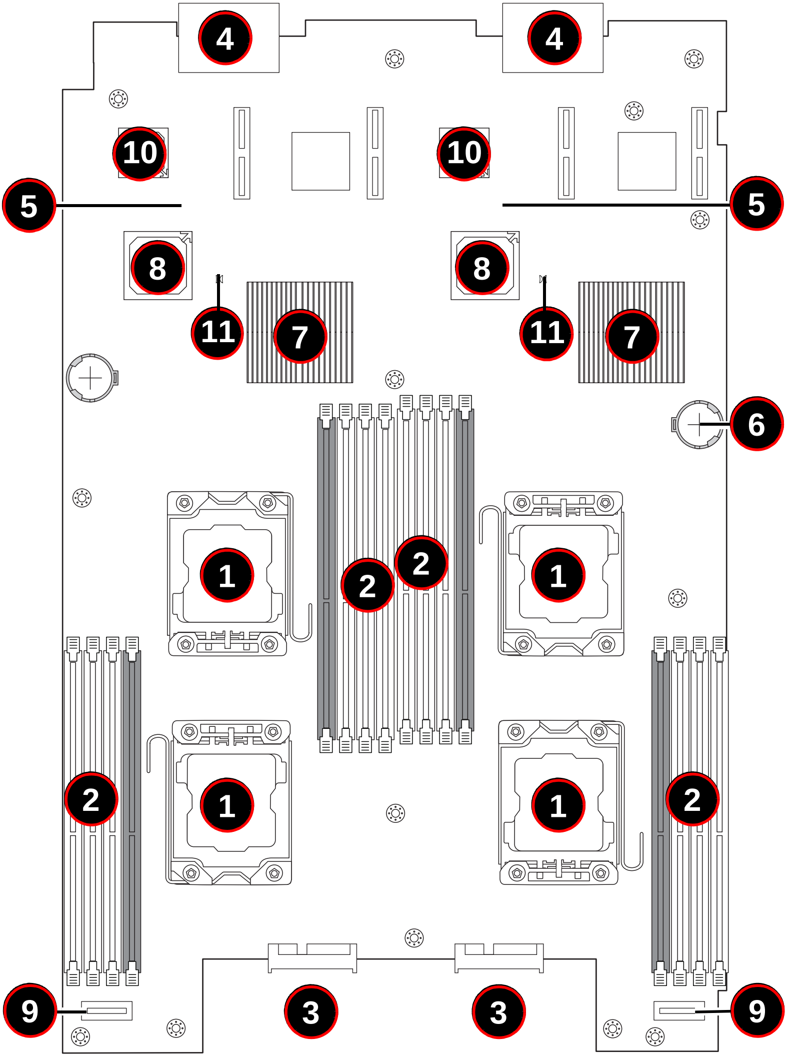

5
4
4
3
3
3
1
2
2
2
2

The main components of the AB2x280 F1 Blade Module are described in the following table.

Item	Description
1	Blade Unit/Module
2	SATA Hard Drives (2 per blade node, 4 total)
3	DIMMs (system memory, 8 per node)
4	CPU Heatsinks (4)
5	Top Cover

Mainboard

Figure 3-135. AB2x280 F1 Mainboard


4
4
10
10
5
5
8
8
11
7
11
7
6
1
2
2
1
2
1
1
2
9
3
3
9

Item	Description
1	CPU Sockets
2	DIMM Slots
3	Space for 2.5” SATA Hard Drive
4	Gbx Connector (for power and logic to backplane)
5	BIOS Chip
6	Onboard Battery
7	Intel 5500 Chip
8	ICH10R Chip
9	Front IO Module
10	Matrox G200eW Graphics chip
11	JPT1 (CMOS clear)

Jumpers

The jumpers present on the mainboard are used by the manufacturer only; there are no jumpers used to configure the operation of the mainboard.

CMOS Clear

JPT1 is used to clear CMOS and will also clear any passwords. JPT1 consists of two contact pads (#11 in Figure 3-135).

Clearing CMOS

1. First power down the blade and remove it from the enclosure.
2. Remove the blade cover to access the mainboard (see Section : Removing/Replacing the Blade Cover on page 93 for further details). Short the CMOS pads with a metal object such as a small screwdriver.
3. Replace the cover, install the blade back into the enclosure and power it on.

Item	Description
1	Blade Unit/Module
2	SATA Hard Drives (2 per blade node, 4 total)
3	DIMMs (system memory, 8 per node)
4	CPU Heatsinks (4)
5	Top Cover

Memory Support

Each node of a AB2x280 F1 blade module supports up to 128GB/32GB of ECC Registered/Unbuffered ECC DDR3-1333 SDRAM in eight DIMM sockets.

Memory Installation

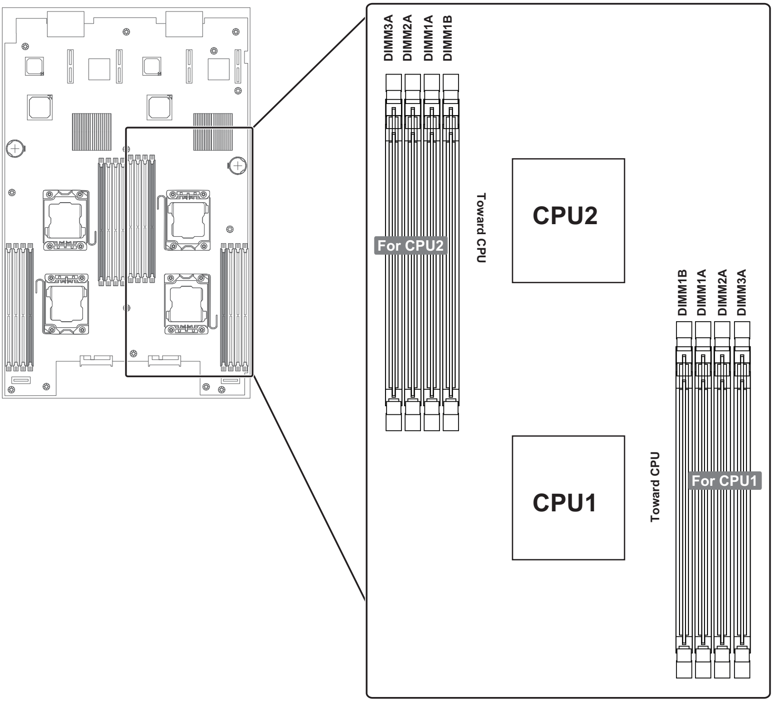
The mainboard of each blade unit must be populated with DIMMs (Dual In-line Memory Modules) to provide system memory. **The DIMMs should all be of the same size and speed and from the same manufacturer due to compatibility issues.**

Populating Memory Slots

The mainboard of a AB2x280 F1 blade module has eight memory slots per node. Both interleaved and non-interleaved memory are supported, so you may populate any number of DIMM slots.

Populating slots at the same time with memory modules of the same size and of the same type will result in three-channel, interleaved memory, which is faster than single-channel, non-interleaved memory. See the following table and Figure 3-106 for details.

Figure 3-136. AB2x280 F1 DIMM Numbering


DIMM3A
DIMM2A
DIMM1A
DIMM1B
For CPU2
Toward CPU
CPU2
DIMM1B
DIMM1A
DIMM2A
DIMM3A
CPU1
Toward CPU
For CPU1

For an interleaved configuration, memory modules of the same size and speed must be installed. You should not mix DIMMs of different sizes and speeds.

Note: The DIMM slot number specified in the following tables equals the DIMM slot to be populated. A "---" indicates that the DIMM slot should be left unpopulated.

Note: Though multiple DIMM memory module types and speeds may be supported, you need to use DIMM memory modules of the same speed and type.

Supported Memory Population

The node has eight DIMM slots. Each CPU controls four DIMM slots. The DIMM slots support three channel DDR3-1333 registered/ unbuffered ECC memory modules. The farthest socket to CPU is socket A (in blue color), while the nearest one is socket B (in black color). For all memory modes, the socket A in each channel should be populated first. If socket A is empty, socket B can't be used.

For the system to function, DIMM modules must be installed following the slot sequence listed below. DIMM module of the same type, size and manufacturer must be installed in the same colored DIMM slots.

Independent mode: Single Processor Configuration.

Total Capacity	DIMM 1B	DIMM 1A	DIMM 2A	DIMM 3A
1GB		1GB		
2GB		1GB	1GB	
3GB		1GB	1GB	1GB
4GB	1GB	1GB	1GB	1GB
2GB		2GB		
4GB		2GB	2GB	
6GB		2GB	2GB	2GB
8GB	2GB	2GB	2GB	2GB
4GB		4GB		
8GB		4GB	4GB	
12GB		4GB	4GB	4GB
16GB	4GB	4GB	4GB	4GB
8GB		8GB		
16GB		8GB	8GB	
24GB		8GB	8GB	8GB
32GB	8GB	8GB	8GB	8GB
16GB		16GB		
32GB		16GB	16GB	
48GB		16GB	16GB	16GB
64GB	16GB	16GB	16GB	16GB

Independent Mode: Dual Processor Configuration

Total Capacity	CPU 1				CPU2			
DIMM	1B	1A	2A	3A	1B	1A	2A	3A
2GB		1GB				1GB		
3GB		1GB	1GB	1GB				
4GB		1GB	1GB			1GB	1GB	
6GB		1GB	1GB	1GB		1GB	1GB	1GB
8GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB	1GB
4GB		2GB				2GB		
6GB		2GB	2GB	2GB				
8GB		2GB	2GB			2GB	2GB	
12GB		2GB	2GB	2GB		2GB	2GB	2GB
16GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB	2GB
8GB		4GB				4GB		
12GB		4GB	4GB	4GB				
16GB		4GB	4GB			4GB	4GB	
24GB		4GB	4GB	4GB		4GB	4GB	4GB
32GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB	4GB
16GB		8GB				8GB		
24GB		8GB	8GB	8GB				
32GB		8GB	8GB			8GB	8GB	
48GB		8GB	8GB	8GB		8GB	8GB	8GB
64GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB	8GB

Total Capacity	CPU 1				CPU2			
DIMM	1B	1A	2A	3A	1B	1A	2A	3A
32GB		16GB				16GB		
48GB		16GB	16GB	16GB				
64GB		16GB	16GB			16GB	16GB	
96GB		16GB	16GB	16GB		16GB	16GB	16GB
128GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB	16GB

Mirroring or Lockstep mode: Single Processor Configuration

Please follow the table as shown below.

The same rule is applied to the CPU2 memory channel.

For mirroring mode, there is a primary and a copy of the primary image. By this definition, the effective size of memory is reduced by at least one-half.

Total Capacity	DIMM 1B	DIMM 1A	DIMM 2A	DIMM 3A
2GB		1GB	1GB	
4GB		2GB	2GB	
8GB		4GB	4GB	
16GB		8GB	8GB	
32GB		16GB	16GB	

Mirroring or Lockstep mode: Dual Processor Configuration

Total Capacity	CPU1				CPU2			
DIMM	1B	1A	2A	3A	1B	1A	2A	3A
2GB		1GB	1GB					
4GB		1GB	1GB			1GB	1GB	
4GB		2GB	2GB					
8GB		2GB	2GB			2GB	2GB	
8GB		4GB	4GB					
16GB		4GB	4GB			4GB	4GB	
16GB		8GB	8GB					
32GB		8GB	8GB			8GB	8GB	
32GB		16GB	16GB					
64GB		16GB	16GB			16GB	16GB	

Sparing Mode: Single Processor Configuration

For sparing mode, there is one memory module as spared. By this definition, the effective size of memory is reduced by the capacity of one memory module installed per processor.

Total Capacity	DIMM 1B	DIMM 1A	DIMM 2A	DIMM 3A
3GB		1GB	1GB	1GB
6GB		2GB	2GB	2GB
12GB		4GB	4GB	4GB
24GB		8GB	8GB	8GB

Total Capacity	DIMM 1B	DIMM 1A	DIMM 2A	DIMM 3A
48GB		16GB	16GB	16GB

Sparing Mode: Dual Processor Configuration

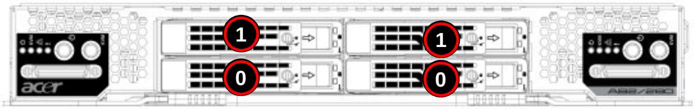
Total Capacity	CPU1				CPU2			
DIMM	1B	1A	2A	3A	1B	1A	2A	3A
3GB		1GB	1GB	1GB				
6GB		1GB	1GB	1GB		1GB	1GB	1GB
6GB		2GB	2GB	2GB				
12GB		2GB	2GB	2GB		2GB	2GB	2GB
12GB		4GB	4GB	4GB				
24GB		4GB	4GB	4GB		4GB	4GB	4GB
24GB		8GB	8GB	8GB				
48GB		8GB	8GB	8GB		8GB	8GB	8GB
48GB		16GB	16GB	16GB				
96GB		16GB	16GB	16GB		16GB	16GB	16GB

AB2x280 F1 Hard Disk Drives

The AB2x280 F1 blade unit accommodates up to two 2.5" SATA hard disk drives per node which are mounted in drive “carriers”. The drives are hot-swappable and can be removed or replaced without powering down the blade unit they reside in. The six drives can be used to set up a RAID array (SATA RAID 0 or 1 only) or JBOD.

AB2x280 F1 HDD Numbering Sequence

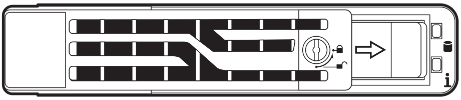
Figure 3-137. AB2x280 F1 HDD Numbering Sequence



Warning! To maintain proper airflow hard drive bays must have drive carriers or dummies inserted during operation.

AB2x280 F1 HDD LED Indicators

Figure 3-138. AB2x280 F1 HDD LED Indicators



Status	🛢 (Blue)	i Red
Power On	ON	OFF
HDD Access	Blink	OFF
HDD Rebuild	Blink	OFF

AB2x280 F1 System BIOS

Introduction

This chapter describes the BIOS for AB2x280 F1blade modules. The AB2x280 F1blade modules use a AMI™ ROM BIOS that is stored in a flash chip. This BIOS can be easily upgraded using a floppy disk-based program.

BIOS

BIOS stands for Basic Input Output System. The AMI BIOS flash chip stores the system parameters, types of disk drives, video displays, etc. in the CMOS. The CMOS memory requires very little electrical power. When the blade unit is turned off, a backup battery provides power to the BIOS flash chip, enabling it to retain system parameters. Each time the blade is powered on it is configured with the values stored in the BIOS ROM by the system BIOS, which gains control at boot up.

How To Change the Configuration Data

The CMOS information that determines the system parameters may be changed by entering the BIOS Setup utility. This Setup utility can be accessed by pressing the <F2> key at the appropriate time during system boot. (See "Starting the Setup Utility" below.)

Starting the Setup Utility

Normally, the only visible POST (Power-On Self-Test) routine is the memory test. As the memory is being tested, press the <F2> key to enter the main menu of the BIOS Setup utility. From the main menu, you can access the other setup screens, such as the Security and Power menus.

Warning! To prevent possible boot failure, do not shut down or reset the system while updating the BIOS.

BIOS Updates

It may be necessary to update the BIOS used in the blade modules on occasion. However, it is recommended that you not update BIOS if you are not experiencing problems with a blade module.

There are several methods you may use to upgrade (flash) your BIOS. After downloading the appropriate BIOS file (in a zip file format), follow one of the methods described below to flash the new BIOS.

Flashing BIOS

Use the procedures below to “Flash” your BIOS with a new update using the KVM dongle, USB ports on the CMM module or by use of a Floppy disk.

Flashing a BIOS using the KVM Dongle:

For this method, you must use a KVM cable (included with the system).

1. Copy the contents of the zip file to a bootable USB pen drive.
2. Connect the KVM cable to the KVM connector at the front of the blade you will be flashing the BIOS to.
3. Connect your bootable USB pen drive to one of the two USB slots on the KVM dongle.
4. Boot to the USB pen drive and go to the directory where you saved the contents of the zip file.
5. Type **flash filename.rom** (replace *filename.rom* by the actual ROM file name).

Flashing a BIOS using the USB Ports on the CMM:

1. Copy the contents of the zip file to a bootable USB pen drive.
2. Connect your bootable USB pen drive to one of the two USB slots on the CMM (located on the back side of the enclosure).
3. Boot to the USB pen drive and go to the directory where you saved the contents of the zip file.
4. Type **flash filename.rom** (replace *filename.rom* by the actual ROM file name).

Flashing a BIOS using a Floppy Image File

This method must be performed remotely.

1. Copy the image file from the zip file to your desktop.
2. Use the web browser or IPMIView to access your CMM remotely using its IP Address.
3. Go to the VIRTUAL MEDIA menu and select FLOPPY IMAGE UPLOAD.
4. BROWSE or OPEN to locate the **.img* file on your desktop and select it.
5. Press the UPLOAD button and wait a few seconds for the image to upload to the CMM.
6. Once the upload finishes, turn on the blade module and press <DEL> to enter the BIOS setup utility.
7. In the BOOT MENU, bring **USB LS120: PEPPCMM VIRTUAL DISC 1** to the top of the boot priority list.
8. Exit while saving the changes. The blade module will boot to the virtual media (floppy image) **A:\>**.
9. Type **flash filename.rom**.

Note: Replace *filename.rom* by the actual ROM file name (such as **B8DTE142.rom** for example) in the command.

Running Setup

Note: Default settings are in **bold** text unless otherwise noted.

The BIOS setup options described in this section are selected by choosing the appropriate text from the MAIN BIOS SETUP screen. All displayed text is described in this section, although the screen display is often all you need to understand how to set the options.

When you first power on the computer, the BIOS is immediately activated.

While the BIOS is in control, the Setup program can be activated in one of two ways:

1. By pressing <F2> immediately after turning the system on, or
2. When the message **Press the <F2> key to enter Setup** appears briefly at the bottom of the screen during the POST, press the <F2> key to activate the main SETUP menu:

Main BIOS Setup

All Main Setup options are described in this section.

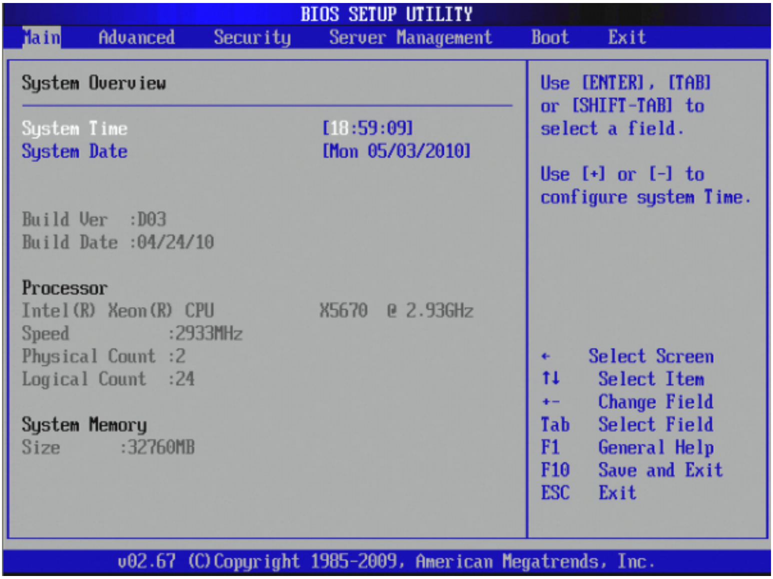
Use the UP/DOWN arrow keys to move among the different settings in each menu. Use the LEFT/RIGHT arrow keys to change the options for each setting.

Press the <ESC> key to exit the CMOS SETUP menu. The next section describes in detail how to navigate through the menus.

Items that use sub-menus are indicated with the ▶ icon. With the item highlighted, press the <ENTER> key to access the submenu.

Menu options found in the MAIN BIOS SETUP menu are shown in Figure 3-139 and described thereafter.

Figure 3-139. Main Setup Menu Screen



BIOS SETUP UTILITY
Main Advanced Security Server Management Boot Exit

```
System Overview                                     Use [ENTER], [TAB]
                                                    or [SHIFT-TAB] to
System Time                     [18:59:09]          select a field.
System Date                     [Mon 05/03/2010]
                                                    Use [+] or [-] to
                                                    configure system Time.
Build Ver   :D03
Build Date  :04/24/10

Processor
Intel(R) Xeon(R) CPU            X5670  @ 2.93GHz
Speed            :2933MHz                           ←     Select Screen
Physical Count :2                                   ↑↓     Select Item
Logical Count  :24                                  +-     Change Field
                                                    Tab    Select Field
System Memory                                       F1     General Help
Size        :32760MB                                F10    Save and Exit
                                                    ESC    Exit
```

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System Overview

System Time/System Date

Use this option to change the system time and date. Highlight System Time or System Date using the arrow keys. Enter new values using the keyboard. Press the <Tab> key or the arrow keys to move between fields.

The date must be entered in MM/DD/YY format. The time is entered in HH:MM:SS format. (Note: The time is in the 24-hour format. For example, 5:30 P.M. appears as 17:30:00.)

Build Ver: This item displays the BIOS revision used in your system.

Build Date: This item displays the date this BIOS was completed.

Processor

The BIOS will automatically display the status of the processor used in your system and indicate the CPU type used.

Speed: This item displays the speed of the CPU detected by the BIOS.

Physical Count: This item displays the number of processors installed in your system as detected by the BIOS.

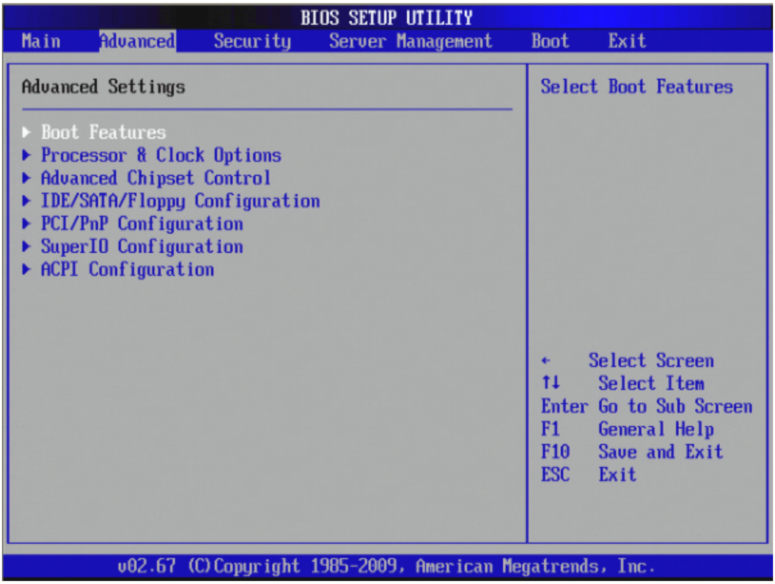
Logical Count: This item displays the number of CPU cores installed in your system as detected by the BIOS.

System Memory

This displays the size of memory available in the system as detected by the BIOS.

Advanced Settings

Figure 3-140. Advanced Settings Menu



```
                         BIOS SETUP UTILITY
 Main   Advanced   Security   Server Management   Boot   Exit

 Advanced Settings                                  Select Boot Features

 ▶ Boot Features
 ▶ Processor & Clock Options
 ▶ Advanced Chipset Control
 ▶ IDE/SATA/Floppy Configuration
 ▶ PCI/PnP Configuration
 ▶ SuperIO Configuration
 ▶ ACPI Configuration

                                                    ←     Select Screen
                                                    ↑↓     Select Item
                                                    Enter Go to Sub Screen
                                                    F1     General Help
                                                    F10    Save and Exit
                                                    ESC    Exit

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```
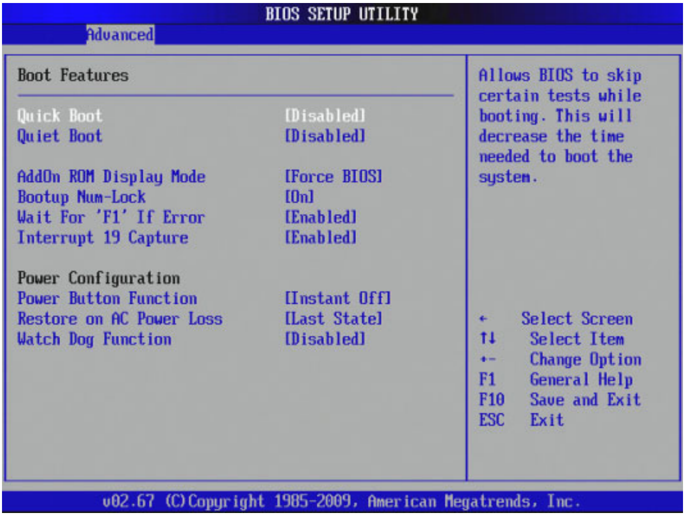

Choose **Advanced** from the BIOS Setup Utility main menu with the arrow keys to display the ADVANCED SETUP menu (Figure 3-140).

The items with a triangle beside them are sub-menus that can be accessed by highlighting the item and pressing <ENTER>.

Boot Features

Figure 3-141. Boot Features



```
                        BIOS SETUP UTILITY
      Advanced
 Boot Features                                   Allows BIOS to skip
 ------------------------------------------      certain tests while
 Quick Boot                  [Disabled]          booting. This will
 Quiet Boot                  [Disabled]          decrease the time
                                                 needed to boot the
 AddOn ROM Display Mode      [Force BIOS]        system.
 Bootup Num-Lock             [On]
 Wait For 'F1' If Error      [Enabled]
 Interrupt 19 Capture        [Enabled]

 Power Configuration
 Power Button Function       [Instant Off]
 Restore on AC Power Loss    [Last State]        ←    Select Screen
 Watch Dog Function          [Disabled]          ↑↓    Select Item
                                                 +-    Change Option
                                                 F1    General Help
                                                 F10   Save and Exit
                                                 ESC   Exit

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```

Quick Boot: Skip certain tests during POST to reduce the time needed for system boot.

Quiet Boot: Allows the bootup screen options to be modified between POST messages or the OEM logo. Select **Disabled** to display the POST messages. Select **Enabled** to display the OEM logo instead of the normal POST messages.

AddOn ROM Display Mode: Sets the display mode for Option ROM.

Bootup Num-Lock: Selects the Power-on state for Numlock key.

Wait For 'F1' If Error: Forces the system to wait until the <F1> key is pressed if an error occurs.

Interrupt 19 Capture: Interrupt 19 is the software interrupt that handles the boot disk function. When this item is set to **Enabled**, the ROM BIOS of the host adaptors will capture Interrupt 19 at boot and allow the drives that are attached to these host adaptors to function as bootable disks. If this item is set to Disabled, the ROM BIOS of the host adaptors will not capture Interrupt 19, and the drives attached to these adaptors will not function as bootable devices.

Power configuration

Power Button Function: If set to Instant_Off, the system will power off immediately when you press the power button. If set to 4_Second_Override, the system will power off when you press the power button for four seconds or longer.

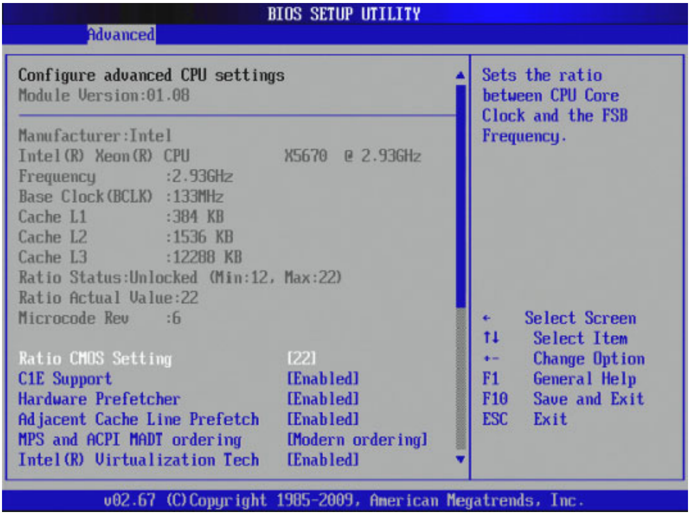
Restore on AC Power Loss: Use this feature to set the power state after a power outage. Select Power-Off for the system power to remain off after a power loss. Select Power-On for the system power to be turned on after a power loss. Select Last State to allow the system to resume its last state before a power loss.

Watch Dog Timer: If enabled, the Watch Dog Timer will allow the system to reboot when it is inactive for more than five minutes.

Processor and Clock Configuration

This submenu displays the status of the processor as detected by the BIOS, including items such as the processor manufacturer, type, frequency, CPUID, Microcode Revision, Cache L1/L2/L3, Ratio Status, and Ratio Actual Value. The submenu also allows you to configure the processor and clock settings.

Figure 3-142. Processor and Clock Configuration



```
Configure advanced CPU settings
Module Version:01.08

Manufacturer:Intel
Intel(R) Xeon(R) CPU            X5670  @ 2.93GHz
Frequency          :2.93GHz
Base Clock(BCLK)   :133MHz
Cache L1           :384 KB
Cache L2           :1536 KB
Cache L3           :12288 KB
Ratio Status:Unlocked (Min:12, Max:22)
Ratio Actual Value:22
Microcode Rev      :6

Ratio CMOS Setting              [22]
C1E Support                     [Enabled]
Hardware Prefetcher             [Enabled]
Adjacent Cache Line Prefetch    [Enabled]
MPS and ACPI MADT ordering      [Modern ordering]
Intel(R) Virtualization Tech    [Enabled]
```

Sets the ratio between CPU Core Clock and the FSB Frequency.

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Ratio CMOS Setting: This option allows you to set the ratio between the CPU core clock and the FSB frequency.The default setting depends on the type of CPU installed on the motherboard. The default setting for the CPU installed in your motherboard is [18]. Press "+" or "-" on your keyboard to change this value.

Note: if an invalid ratio is entered, the BIOS will restore the setting to the previous state.

C1E Support: Select Enabled to use the feature of Enhanced Halt State. C1E significantly reduces the CPU's power consumption by reducing the CPU's clock cycle and voltage during a Halt State.

Important: The following feature is only available if supported by the processor and/or operating system.

Hardware Prefetcher: If set to **Enabled,** the hardware prefetcher will prefetch streams of data and instructions from the main memory to the L2 cache in the forward or backward manner to improve CPU performance.

Important: The following feature is only available if supported by the iprocessor and/or operating system.

Adjacent Cache Line Prefetch: The CPU fetches the cache line for 64 bytes if this option is set to **Disabled**. The CPU fetches both cache lines for 128 bytes as comprised if **Enabled**.

MPS and ACPI MADT Ordering: Allows you to configure the MPS (Multi- Processor Specifications) and ACPI settings for your motherboard. Select **Modern Ordering** if Windows XP or newer is used. Select Legacy Ordering if Windows 2000 or earlier is used.

Important: The following feature is only available if supported by the processor and/or operating system.

Intel Virtualization Technology: Select **Enabled** to use Virtualization Technology to allow one platform to run multiple operating systems and applications in independent partitions, creating multiple virtual systems in one physical computer.

Important: The following feature is only available if supported by the processor and/or operating system.

Execute-Disable Bit Capability: Set to **Enabled** to enable the Execute Disable Bit which will allow the processor to designate areas in the system memory where an application code can execute and where it cannot, thus preventing a worm or a virus from flooding illegal codes to overwhelm the processor or damage the system during an attack.

Important: The following feature is only available if supported by the processor and/or operating system.

Simultaneous Multi-Threading: Set to **Enabled** to use simultaneous multi-threading technology, which will result in increased CPU performance.

Active Processor Cores: Set to **Enabled** to use a processor's second core and beyond. The options are All, 1 and 2.

Intel EIST Technology: EIST (Enhanced Intel SpeedStep Technology) allows the system to automatically adjust processor voltage and core frequency in an effort to reduce power consumption and heat dissipation.

Please refer to Intel’s web site for detailed information. The options are Disable (Disable GV3) and Enable (Enable GV3).

Intel® Turbo Boost (Available when Intel® EIST Technology is enabled): Select **Enabled** to use the Turbo Mode to boost system performance.

Performance/Watt Select: When selected the "Power Optimized" (Turbo Boost engages after p) state is sustained for more than 2 seconds. In the default setting "Traditional", Turbo Boost engages even for a P0 state of less than 2 seconds.

Intel C-STATE Tech: If **Enabled,** C-State is set by the system automatically to either C2, C3 or C4.

C3 State: This feature allows the user to decide how the onboard 5500 Series processor will act at C3 State.

C6 State: This feature allows the user to decide how the onboard 5500 Series processor will act at C6 State.

C-State package limit setting: If set to **Auto,** the BIOS will automatically set the limit on the C-State package register.

C1 Auto Demotion: When **Enabled,** the CPU will conditionally demote C3, C6 or C7 requests to C1 based on un-core auto-demote information.

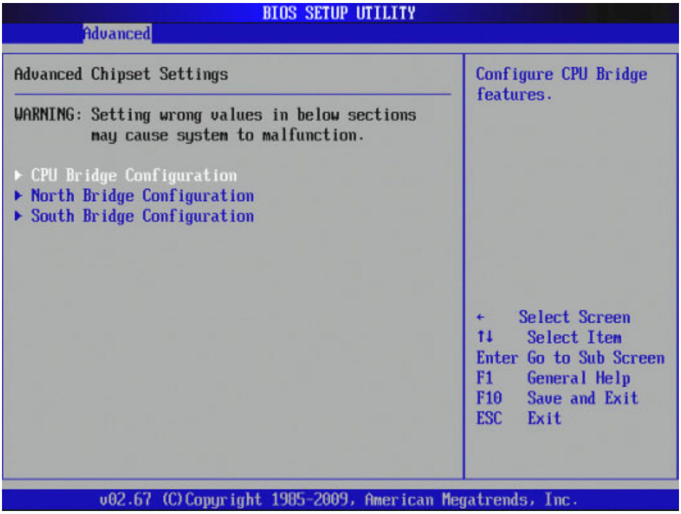
C3 Auto Demotion: When **Enabled,** the CPU will conditionally demote C6 or C7 requests to C3 based on un-core auto-demote information.

Clock Spread Spectrum: Select **Enable** to use the feature of Clock Spectrum, which will allow the BIOS to monitor and attempt to reduce the level of Electromagnetic Interference caused by the components whenever needed.

Advanced Chipset Control

The items included in the Advanced Settings submenu are listed below:

Figure 3-143. Advanced Chipset Control



BIOS SETUP UTILITY

Advanced Chipset Settings

WARNING: Setting wrong values in below sections
may cause system to malfunction.

Configure CPU Bridge features.

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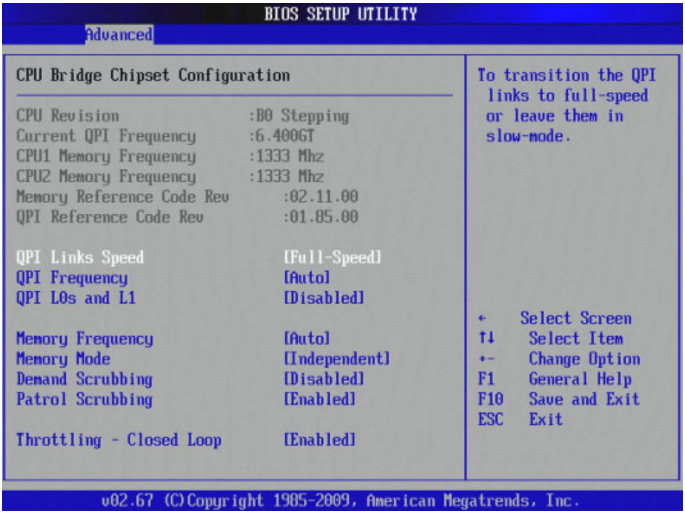
Advanced
▸ CPU Bridge Configuration
▸ North Bridge Configuration
▸ South Bridge Configuration
← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit

CPU Bridge configuration

Figure 3-144. CPU Bridge Configuration



```
                         BIOS SETUP UTILITY
        Advanced

 CPU Bridge Chipset Configuration              To transition the QPI
                                                links to full-speed
 CPU Revision              :B0 Stepping         or leave them in
 Current QPI Frequency     :6.400GT             slow-mode.
 CPU1 Memory Frequency     :1333 Mhz
 CPU2 Memory Frequency     :1333 Mhz
 Memory Reference Code Rev      :02.11.00
 QPI Reference Code Rev         :01.05.00

 QPI Links Speed                [Full-Speed]
 QPI Frequency                  [Auto]
 QPI L0s and L1                 [Disabled]
                                               ←    Select Screen
 Memory Frequency               [Auto]         ↑↓    Select Item
 Memory Mode                    [Independent]  +-    Change Option
 Demand Scrubbing               [Disabled]     F1    General Help
 Patrol Scrubbing               [Enabled]      F10   Save and Exit
                                               ESC   Exit
 Throttling - Closed Loop       [Enabled]

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```

QPI Links Speed: This feature selects QPI data transfer speed.

Important: The following feature is only available when QPI Links Speed is set to Full Speed.

QPI Frequency: This selects the desired QPI frequency.

QPI L0s and L1: This enables the QPI power state to low power. L0s and L1 are automatically selected by the motherboard.

Memory Frequency: This feature enables you to force a DDR3 frequency slower than what the system has detected.

Memory Mode: Set the memory mode.

- Independent - All DIMMs are available to the operating system.
- Channel Mirror - The motherboard maintains two identical copies of all data in memory for redundancy.
- Lockstep - The motherboard uses two areas of memory to run the same set of operations in parallel.

Demand Scrubbing: A memory error-correction scheme where the processor writes corrected data back into the memory block from where it was read by the processor.

Patrol Scrubbing: A memory error-correction scheme that works in the background looking for and correcting resident errors.

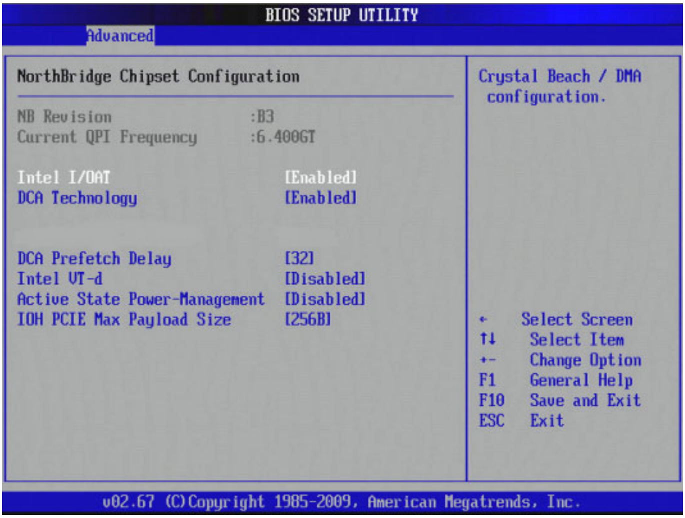
Throttling - Closed Loop/Throttling - Open Loop: Throttling improves reliability and reduces power in the processor by automatic voltage control during processor idle states. If **Enabled,** the following items will appear:

- Hysteresis Temperature (For Closed Loop only) - Temperature Hysteresis is the temperature lag (in degrees Celsius) after the set DIMM temperature threshold is reached before Closed Loop Throttling begins.
- Guardband Temperature (For the Closed Loop only) - This is the temperature which applies to the DIMM temperature threshold. Steps are in 0.5 °C increments. The default is [006]. Press "+" or "-" on your keyboard to change this value.
- Inlet Temperature - This is the temperature detected at the chassis inlet. Steps are in 0.5 °C increments. The default is [070]. Press "+" or "-" on your keyboard to change this value.
- Temperature Rise - This is the temperature rise to the DIMM thermal zone. Steps are in 0.5 °C increments. The default is [020]. Press "+" or "-" on your keyboard to change this value.
- Air Flow - This is the air flow speed to the DIMM modules. Each step is one mm/sec. The default is [1500]. Press "+" or "-" on your keyboard to change this value.
- Altitude - This feature defines how many meters above or below sea level the system is located.
- DIMM Pitch - This is the physical space between each DIMM module. Each step is 1/1000 of an inch. The default is [400]. Press "+" or "-" on your keyboard to change this value.

NorthBridge configuration

This feature allows you to configure the settings for the Intel NorthBridge chip.

Figure 3-145. NorthBridge configuration



```
                         BIOS SETUP UTILITY
       Advanced
 NorthBridge Chipset Configuration                  Crystal Beach / DMA
                                                     configuration.
 NB Revision                  :B3
 Current QPI Frequency        :6.400GT

 Intel I/OAT                      [Enabled]
 DCA Technology                   [Enabled]

 DCA Prefetch Delay               [32]
 Intel VT-d                       [Disabled]
 Active State Power-Management    [Disabled]
 IOH PCIE Max Payload Size        [256B]            ←     Select Screen
                                                    ↑↓     Select Item
                                                    +-     Change Option
                                                    F1     General Help
                                                    F10    Save and Exit
                                                    ESC    Exit

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```

Intel I/OAT: Significantly reduces CPU overhead by leveraging CPU architectural improvements, freeing resources for other tasks.

DCA Technology: Uses Intel's DCA (Direct Cache Access) Technology to enhance data transfer efficiency.

DCA Prefetch Delay: Used with TOE components to prefetch data in order to shorten execution cycles and maximize data processing effi ciency. Prefetching too frequently can saturate the cache directory and delay necessary cache accesses. This feature reduces or increases the frequency the system prefetches data.

Intel VT-d: Select **Enabled** to enable Intel Virtualization Technology support for Direct I/O VT-d by reporting the I/O device assignments to VMM through the DMAR ACPI Tables. This feature offers fully-protected I/O resource-sharing across the Intel platforms, providing you with greater reliability, security and availability in networking and data-sharing.

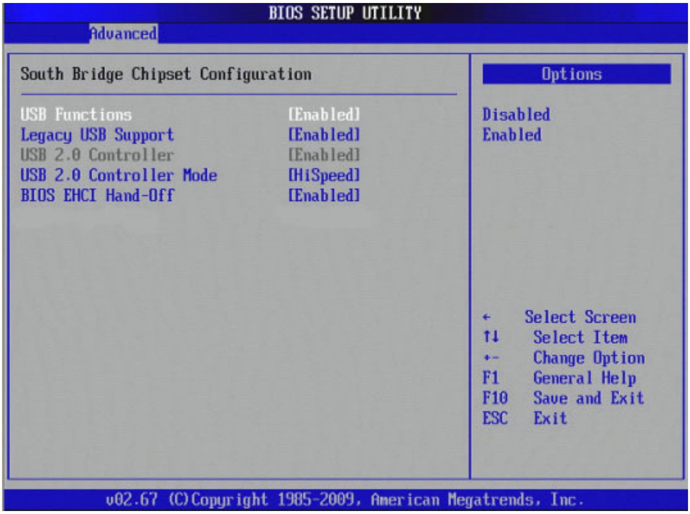
Active State Power-Management: Uses power management for signal transactions between the PCI Express L0 and L1 Links. Select Enabled to configure PCI Express L0 and L1 Link power states.

IOH PCIE Max Payload Size: Some add-on cards perform faster with the coalesce feature, which limits the payload size to 128 MB. Others perform better with a payload size of 256 MB, which inhibits the coalesce feature. Please refer to your add-on card user guide for the desired setting.

SouthBridge configuration

This feature allows you to configure the settings for the Intel ICH SouthBridge chipset.

Figure 3-146. SouthBridge configuration


BIOS SETUP UTILITY
Advanced
Options
Disabled
Enabled
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit

```
South Bridge Chipset Configuration

USB Functions                [Enabled]
Legacy USB Support           [Enabled]
USB 2.0 Controller           [Enabled]
USB 2.0 Controller Mode      [HiSpeed]
BIOS EHCI Hand-Off           [Enabled]

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```

USB Functions: This feature allows you to decide how many onboard USB ports to enable.

Legacy USB Support: Select **Enabled** to use Legacy USB devices. If set to Auto, legacy USB support will be automatically enabled if a legacy USB device is installed on the motherboard.

Note: Only available when USB Functions is set to Enabled.

USB 2.0 Controller: Select Enabled to activate the onboard USB 2.0 controller.

Note: Only available when USB Functions is set to Disabled. Otherwise, this item will be set to Enabled by the BIOS.

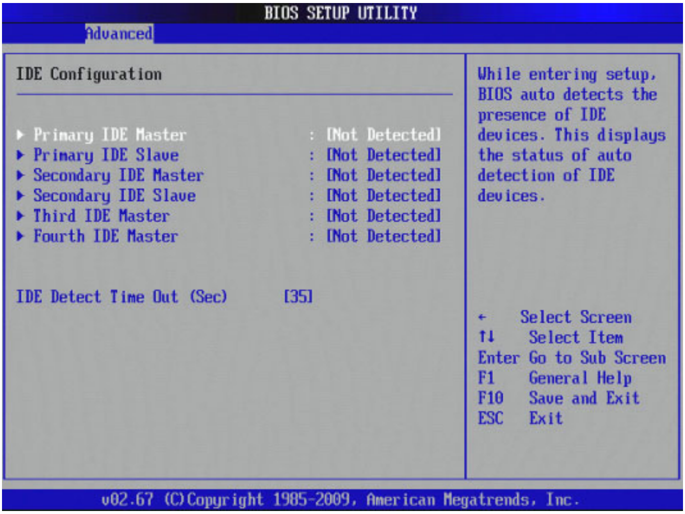
USB 2.0 Controller Mode: This setting allows you to select the USB 2.0 Controller mode.

BIOS EHCI Hand-Off: Enable or disable BIOS Enhanced Host Controller Interface support to provide a workaround solution for an operating system that does not have EHCI Hand-Off support. When enabled, the EHCI Interface will be changed from BIOS-controlled to OS-controlled.

IDE/SATA configuration

When this submenu is selected, the BIOS automatically detects the presence of the IDE devices and displays the following items:

Figure 3-147. IDE/SATA configuration



BIOS SETUP UTILITY
Advanced

```
IDE Configuration

▸ Primary IDE Master          : [Not Detected]
▸ Primary IDE Slave           : [Not Detected]
▸ Secondary IDE Master        : [Not Detected]
▸ Secondary IDE Slave         : [Not Detected]
▸ Third IDE Master            : [Not Detected]
▸ Fourth IDE Master           : [Not Detected]

IDE Detect Time Out (Sec)   [35]
```

While entering setup, BIOS auto detects the presence of IDE devices. This displays the status of auto detection of IDE devices.

← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
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SATA#1 configuration: If **Compatible** is selected, it sets SATA#1 to legacy compatibility mode, while selecting **Enhanced** sets SATA#1 to native SATA mode.

- Configure SATA#1 as - This feature allows you to select the drive type for SATA#1. The options are IDE, RAID and AHCI.

- ICH RAID Code Base - Select Intel or Adaptec to launch the appropriate SATA RAID firmware to configure SATA RAID.

SATA#2 configuration: Selecting **Enhanced** will set SATA#2 to native SATA mode.

Primary IDE Master/Slave, Secondary IDE Master/Slave, Third IDE Master, and Fourth IDE Master: These settings allow you to set the parameters of the IDE slots. Press <**Enter**> to activate the submenu screen for detailed options of these items. Set the configurations accordingly. Items included in the submenu are:

- Type - Select the type of device connected to the system.
- LBA/Large Mode - LBA (Logical Block Addressing) is a method of addressing data on a disk drive. In the LBA mode, the maximum drivecapacity is 137 GB. For drive capacities over 137 GB, your system must be equipped with a 48-bit LBA mode addressing. If not, contact your manufacturer or install an ATA/133 IDE controller card that supports 48-bit LBA mode.
- Block (Multi-Sector Transfer) - Block Mode boosts the IDE drive performance by increasing the amount of data transferred. Only 512 bytes of data can be transferred per interrupt if Block Mode is not used. Block Mode allows transfers of up to 64 KB per interrupt. Select Disabled to allow data to be transferred from and to the device one sector at a time. Select Auto to allow data transfer from and to the device occur multiple sectors at a time if the device supports it.
- PIO Mode - The IDE PIO (Programmable I/O) Mode programs timing cycles between the IDE drive and the programmable IDE controller. As the PIO mode increases, the cycle time decreases.

Select	Description
Auto	Automatically detect the PIO mode. Use this value if the IDE disk drive support cannot be determined.
0	Use PIO mode 0. It has a data transfer rate of 3.3 MBs.
1	Use PIO mode 1. It has a data transfer rate of 5.2 MBs.
2	Use PIO mode 2. It has a data transfer rate of 8.3 MBs.
3	Use PIO mode 3. It has a data transfer rate of 11.1 MBs.

Select	Description
4	Use PIO mode 4. It has a data transfer bandwidth of 32 bits.
Enabled	Enable 32-bit data transfer.

- DMA Mode

Select	Description
Auto	Automatically detect IDE DMA mode when the IDE disk drive support cannot be determined.
SWDMA0	Use Single Word DMA mode 0. It has a data transfer rate of 2.1 MBs.
SWDMA2	Use Single Word DMA mode 2. It has a data transfer rate of 8.3 MBs.
MWDMA0	Use Multi Word DMA mode 0. It has a data transfer rate of 4.2 MBs.
MWDMA1	Use Multi Word DMA mode 1. It has a data transfer rate of 13.3 MBs.
MWDMA2	Use Multi-Word DMA mode 2. It has a data transfer rate of 16.6 MBs.
UDMA0	Use Ultra DMA mode 0. It has a data transfer rate of 16.6 MBs. It has the same transfer rate as PIO mode 4 and Multi Word DMA mode 2.
UDMA1	Use Ultra DMA mode 1. It has a data transfer rate of 25 MBs.
UDMA2	Use Ultra DMA mode 2. It has a data transfer rate of 33.3 MBs.
UDMA3	Use Ultra DMA mode 3. It has a data transfer rate of 66.6 MBs.
UDMA4	Use Ultra DMA mode 4. It has a data transfer rate of 100 MBs.
UDMA5	Use Ultra DMA mode 5. It has a data transfer rate of 133 MBs.
UDMA6	Use Ultra DMA mode 6. It has a data transfer rate of 133 MBs.

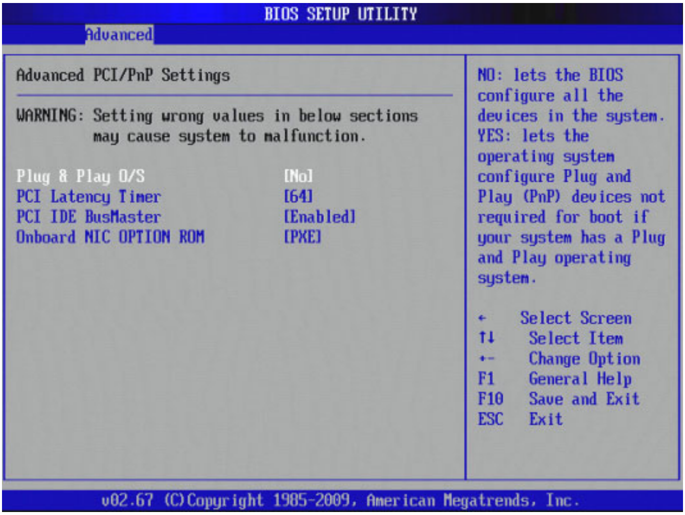
- S.M.A.R.T. For Hard disk drives - Self-Monitoring Analysis and Reporting Technology (SMART) can help predict impending drive failures. Select Auto to allow the BIOS to automatically detect hard disk drive support.

- 32Bit Data Transfer - Select Enable to enable the function of 32-bit IDE data transfer.

IDE Detect Timeout (sec): Use this feature to set the time-out value for the BIOS to detect the ATA, ATAPI devices installed in the system.

PCI/PnP configuration

Figure 3-148. PCI/PnP configuration



```
                         BIOS SETUP UTILITY
        Advanced
 Advanced PCI/PnP Settings                    NO: lets the BIOS
                                              configure all the
 WARNING: Setting wrong values in below sections devices in the system.
          may cause system to malfunction.   YES: lets the
                                              operating system
 Plug & Play O/S               [No]           configure Plug and
 PCI Latency Timer             [64]           Play (PnP) devices not
 PCI IDE BusMaster             [Enabled]      required for boot if
 Onboard NIC OPTION ROM        [PXE]          your system has a Plug
                                              and Play operating
                                              system.

                                              ←    Select Screen
                                              ↑↓   Select Item
                                              +-   Change Option
                                              F1   General Help
                                              F10  Save and Exit
                                              ESC  Exit

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```

Plug & Play OS Selecting: Yes allows the OS to configure Plug & Play devices. (This is not required for system boot if your system has an oerating system that supports Plug & Play.) Select **No** to allow the BIOS to configure all devices in the system.

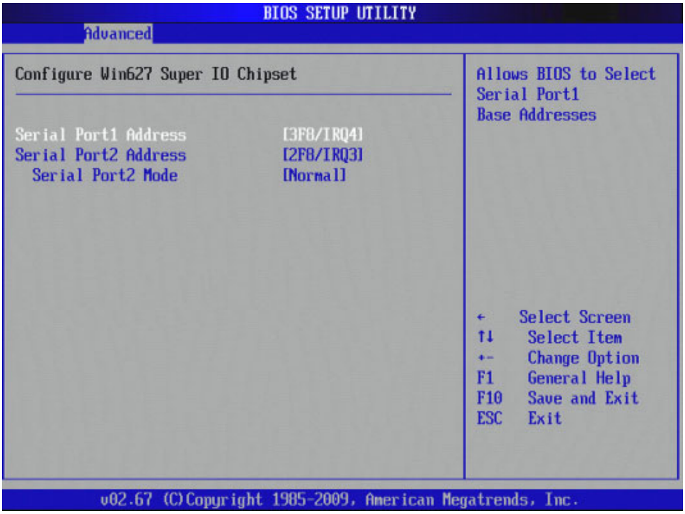
PCI Latency Timer: This feature sets the latency timer of each PCI device installed on a PCI bus.

PCI IDE BusMaster: When Enabled, the BIOS uses PCI bus mastering for reading/writing to IDE drives.

Onboard NIC Option ROM : Select **iSCSI** to use the iSCSI Option ROM to boot the computing using a network device. Select **PXE** to use the PXE Option ROM to boot the computer using a network device.

Super IO Device configuration

Figure 3-149. Super IO Device configuration


BIOS SETUP UTILITY
Advanced
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit

Configure Win627 Super IO Chipset

```
Serial Port1 Address          [3F8/IRQ4]
Serial Port2 Address          [2F8/IRQ3]
  Serial Port2 Mode           [Normal]
```

Allows BIOS to Select Serial Port1 Base Addresses

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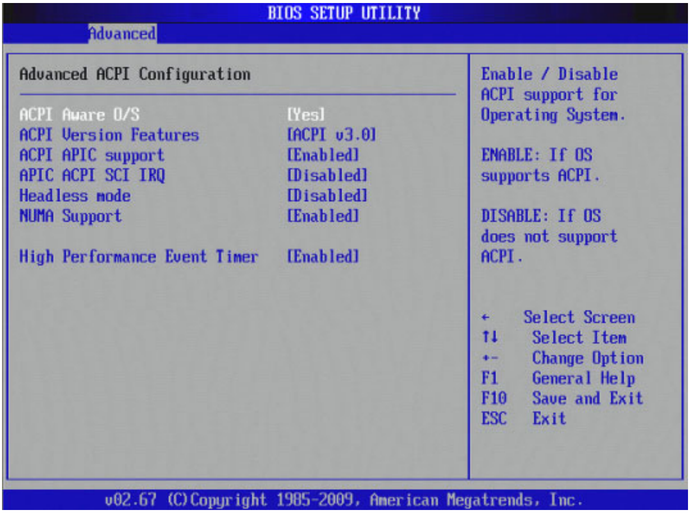
Serial Port1 Address/ Serial Port2 Address: This option specifies the base I/O port address and the Interrupt Request address of Serial Port 1 and Serial Port 2. Select **Disabled** to prevent the serial port from accessing any system resources. When this option is set to Disabled, the serial port physically becomes unavailable. Select 3F8/IRQ4 to allow the serial port to use 3F8 as its I/O port address and IRQ 4 for the interrupt address.

ACPI configuration

Figure 3-150. ACPI configuration



```
                         BIOS SETUP UTILITY
          Advanced
 Advanced ACPI Configuration                        Enable / Disable
                                                    ACPI support for
 ACPI Aware O/S                 [Yes]               Operating System.
 ACPI Version Features          [ACPI v3.0]
 ACPI APIC support              [Enabled]           ENABLE: If OS
 APIC ACPI SCI IRQ              [Disabled]          supports ACPI.
 Headless mode                  [Disabled]
 NUMA Support                   [Enabled]           DISABLE: If OS
                                                    does not support
 High Performance Event Timer   [Enabled]           ACPI.

                                                    ←     Select Screen
                                                    ↑↓     Select Item
                                                    +-     Change Option
                                                    F1     General Help
                                                    F10    Save and Exit
                                                    ESC    Exit

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```

Use this feature to configure Advanced configuration and Power Interface (ACPI) power management settings for your system.

ACPI Aware O/S: Select **Yes** to enable ACPI support for an operating system that supports ACPI. Select **No** to disable ACPI support for an OS that does not support ACPI.

ACPI Version Features: The options are ACPI v1.0, ACPI v2.0 and ACPI v3.0. Please refer to ACPI's website for further explanation: http://www.acpi.info/.

ACPI APIC Support: Select **Enabled** to include the ACPI APIC Table Pointer in the RSDT pointer list.

Note: Only available when ACPI is enabled on an ACPI-aware operating system.

APIC ACPI SCI IRQ: When this item is set to **Enabled,** APIC ACPI SCI IRQ is supported by the system.

Headless Mode: Enables the system to function without a keyboard, monitor, or mouse attached.

Note: Only available when ACPI is enabled on an ACPI-aware operating system.

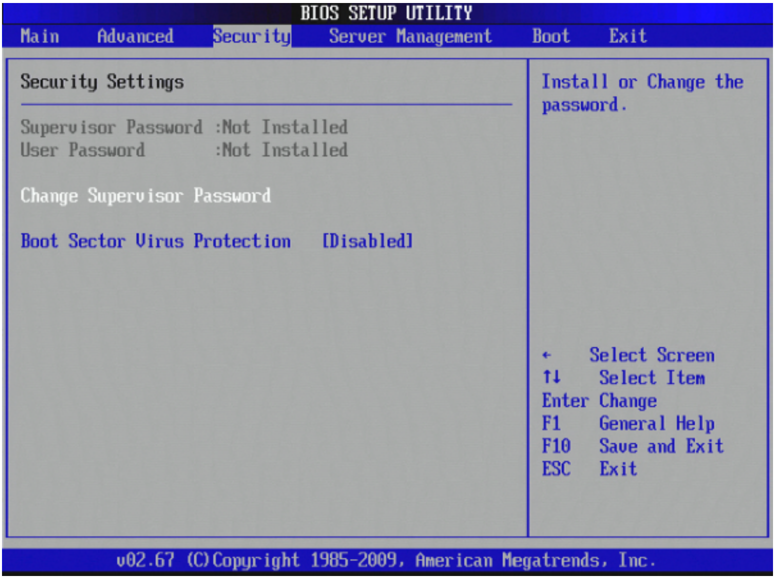
NUMA Support: Uses Non-Uniform Memory Access to improve CPU performance.

High Performance Event Timer: Select **Enabled** to activate the High Performance Event Timer (HPET) that produces periodic interrupts at a much higher frequency than a Real-time Clock (RTC) does in synchronizing multimedia streams, providing smooth playback and reducing the dependency on other timestamp calculation devices, such as an x86 RDTSC Instruction embedded in the CPU. The High Performance Event Timer is used to replace the 8254 Programmable Interval Timer.

Security

The BIOS provides a Supervisor and a User password. If you use both passwords, the Supervisor password must be set first.

Figure 3-151. Security Setup Menu



```
                         BIOS SETUP UTILITY
 Main    Advanced    Security    Server Management    Boot    Exit

 Security Settings                              Install or Change the
                                                password.
 Supervisor Password  :Not Installed
 User Password        :Not Installed

 Change Supervisor Password

 Boot Sector Virus Protection   [Disabled]

                                                ←     Select Screen
                                                ↑↓     Select Item
                                                Enter Change
                                                F1     General Help
                                                F10    Save and Exit
                                                ESC    Exit

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```

Supervisor Password: This item indicates if a supervisor password has been entered for the system. Clear means such a password has not been used and Set means a supervisor password has been entered for the system.

User Password: This item indicates if a user password has been entered for the system. Clear means such a password has not been used and Set means a user password has been entered for the system.

Change Supervisor Password: Select this feature and press <Enter> to access the submenu, and then type in a new Supervisor Password.

User Access Level: (Available when Supervisor Password is set as above) Available options are:

- Full Access - grants full User read and write access to the Setup Utility.
- View Only - allows access to the Setup Utility but the fields cannot

be changed.

- Limited - allows only limited .elfis to be changed such as Date and Time
- No Access - prevents User access to the Setup Utility.

Change User Password: Select this feature and press <**Enter**> to access the submenu , and then type in a new User Password.

Clear User Password: (Available only if User Password has been set) This item allows you to clear a user password after it has been entered.

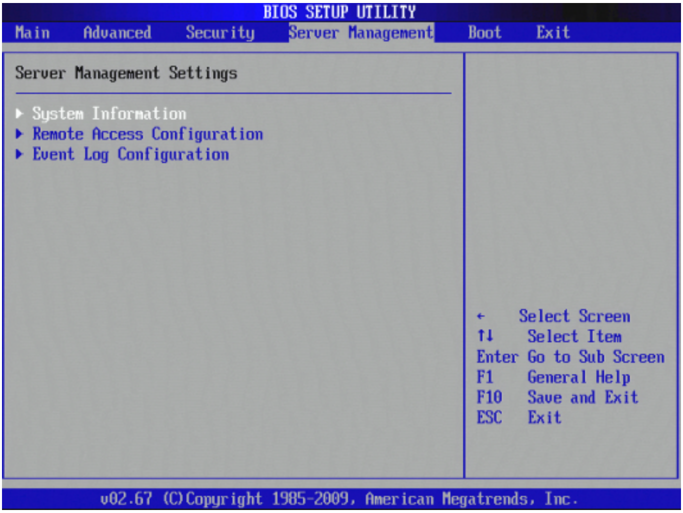
Password Check: If set to **Setup**, a password is required to enter the Setup Utility. If set to **Always**, the system will prompt for a password at bootup.

Boot Sector Virus Protection: When **Enabled**, the BIOS displays a warning when any program (or virus) issues a disk format command or attempts to write to the boot sector of the hard disk drive.

Server Management Settings

Use this feature to configure Server Management settings.

Figure 3-152. Use this feature to configure Server Management settings.



BIOS SETUP UTILITY
Main
Advanced
Security
Server Management
Boot
Exit

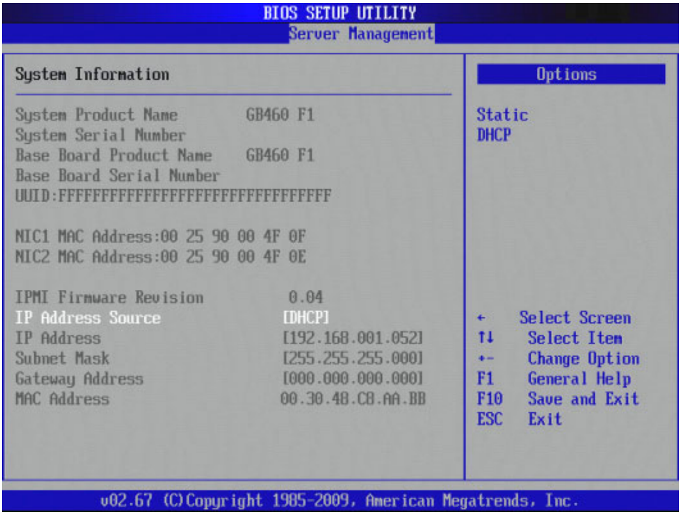
Server Management Settings

▸ System Information
▸ Remote Access Configuration
▸ Event Log Configuration

← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
v02.67 (C)Copyright 1985-2009, American Megatrends, Inc.

System Information

Figure 3-153. System Information



```
                         BIOS SETUP UTILITY
                          Server Management
System Information                              Options

System Product Name        GB460 F1             Static
System Serial Number                            DHCP
Base Board Product Name    GB460 F1
Base Board Serial Number
UUID:FFFFFFFFFFFFFFFFFFFFFFFFFFFFFFFF

NIC1 MAC Address:00 25 90 00 4F 0F
NIC2 MAC Address:00 25 90 00 4F 0E

IPMI Firmware Revision          0.04
IP Address Source              [DHCP]           ←    Select Screen
IP Address                     [192.168.001.052] ↑↓   Select Item
Subnet Mask                    [255.255.255.000] +-   Change Option
Gateway Address                [000.000.000.000] F1   General Help
MAC Address                    00.30.48.C8.AA.BB F10  Save and Exit
                                                ESC  Exit

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```

This submenu displays the following product information.

- System Product Name
- System Serial Number
- Base Board Product Name
- Base Board Serial Number
- UUID
- NIC1 Mac Address
- NIC2 Mac Address
- IPMI Firmware Revision

IP Address Source: Select how an IP address is assigned to a client computer or network device. Select DHCP (Dynamic Host Configuration Protocol) to allow a client (computer or device) to obtain an IP address from a DHCP server that manages a pool of IP addresses and network information on a request and grant basis. Select **Static** (Static Allocation) to allow the host server to allocate an IP address based on a table containing MAC Address/IP Address pairs that are manually entered (such as by a network administrator). Only clients with a MAC address listed in the MAC/ IP Address Table will be assigned an IP address.

IP Address: The BIOS will automatically display the IP address of the machine. This should be in decimal and in dotted quad form (i.e., 192.168.10.253). The value of each three-digit number separated by dots should not exceed 255.

Note: This feature can be changed by the user when the IP Source is set to Static.

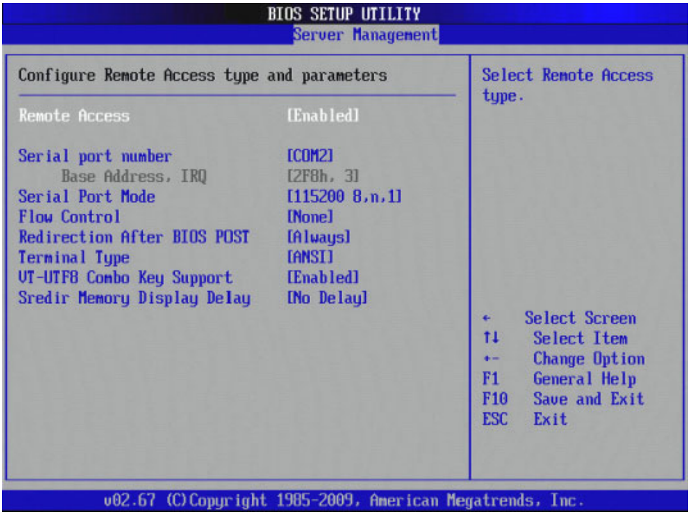
Subnet Mask: This item displays the current subnet mask setting for your IPMI connection. This should be in decimal and in dotted quad form (e.g., 192.168.10.253). The value of each three-digit number separated by dots should not exceed 255.

Acer Address: The BIOS will automatically display the Acer address of this machine. This should be in decimal and in dotted quad form (i.e., 192.168.10.253). The value of each three-digit number separated by dots should not exceed 255.

Mac Address: The BIOS will automatically enter the Mac address of this machine. Mac addresses are 6 two-digit hexadecimal numbers (Based 16, 0 to 9, A, B, C, D, E, F) separated by dots. (e.g., 00.30.48.D0.D4.60).

Remote Access Configuration

Figure 3-154. Remote Access Configuration



```
                          BIOS SETUP UTILITY
                                          Server Management

 Configure Remote Access type and parameters        Select Remote Access
                                                    type.
 Remote Access                  [Enabled]

 Serial port number             [COM2]
      Base Address, IRQ         [2F8h, 3]
 Serial Port Mode               [115200 8,n,1]
 Flow Control                   [None]
 Redirection After BIOS POST    [Always]
 Terminal Type                  [ANSI]
 VT-UTF8 Combo Key Support      [Enabled]
 Sredir Memory Display Delay    [No Delay]

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```

Remote Access: This allows you to enable Remote Access support. If Remote Access is set to Enabled, the following items will be displayed:

Serial Port Number: This feature allows the user to decide which serial port to be used for Console Redirection. The options are COM 1 and COM2.

Base Address, IRQ: This item displays the base address and IRQ of the serial port used for Console Redirection.

Serial Port Mode: Allows you to set the serial port mode for Console Redirection.

Flow Control: Allows you to set the flow control for Console Redirection.

Redirection After BIOS POST: Select **Disabled** to turn off Console Redirection after POST or **Always** to keep Console Redirection active all the time after POST. Select **Boot Loader** to keep Console Redirection active during POST and Boot Loader.

Note: Some settings may not be supported by some operating systems.

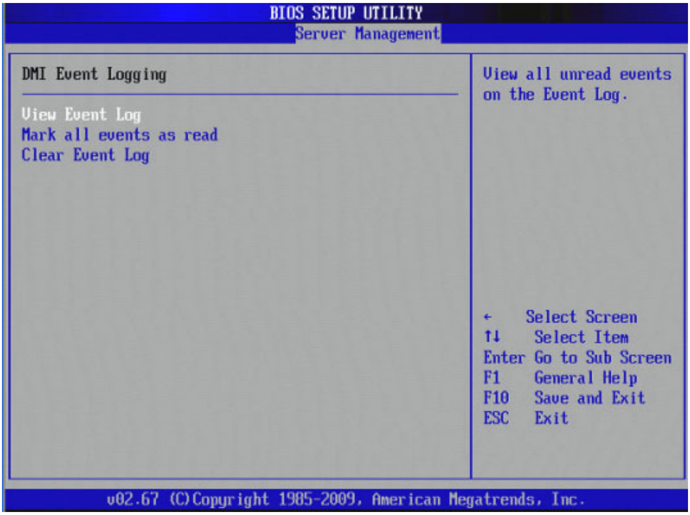
Terminal Type: Allows you to select the target terminal type for Console Redirection.

VT-UTF8 Combo Key Support: Select **Enabled** to enable VT-UTF8 Combination Key support for ANSI/VT100 terminals.

Sredir Memory Display Delay: Defines the length of time in seconds to display memory information.

Event Log Configuration

Figure 3-155. Event Log Configuration



```
                         BIOS SETUP UTILITY
                          Server Management
 DMI Event Logging                            View all unread events
                                              on the Event Log.
 View Event Log
 Mark all events as read
 Clear Event Log

                                              ←     Select Screen
                                              ↑↓    Select Item
                                              Enter Go to Sub Screen
                                              F1    General Help
                                              F10   Save and Exit
                                              ESC   Exit

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```

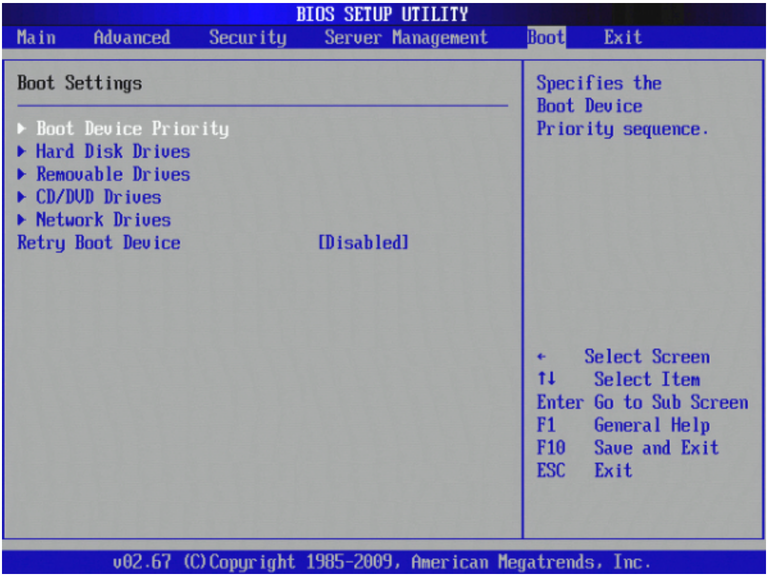
View Event Log: View the System Event Log.

Mark All Events as Read: Marks all events as read.

Clear Event Log: This option clears the Event Log memory of all messages.

Boot

Figure 3-156. Boot Setup



BIOS SETUP UTILITY
Main
Advanced
Security
Server Management
Boot
Exit

Boot Settings

- Boot Device Priority
- Hard Disk Drives
- Removable Drives
- CD/DVD Drives
- Network Drives

Retry Boot Device [Disabled]

Specifies the Boot Device Priority sequence.

← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit
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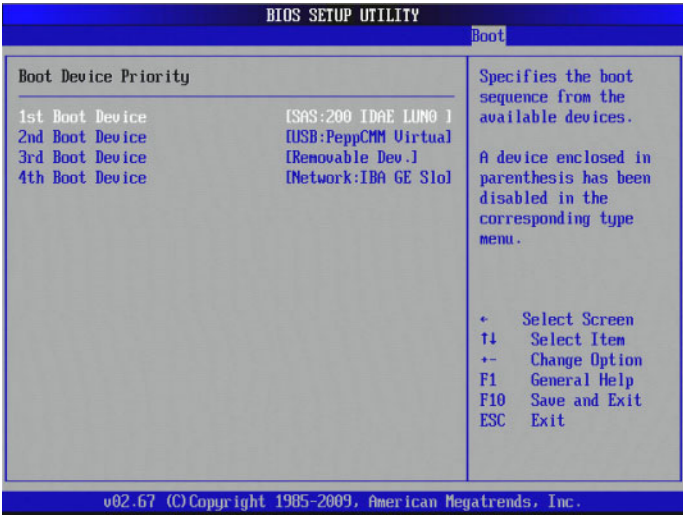
This menu allows you to configure boot settings for the system.

Boot Device Priority

This feature allows you to specify the sequence of priority for the Boot Device.

Figure 3-157. Boot Device Priority


BIOS SETUP UTILITY
Boot

Boot Device Priority

```
1st Boot Device          [SAS:200 IDAE LUN0 ]
2nd Boot Device          [USB:PeppCMM Virtual]
3rd Boot Device          [Removable Dev.]
4th Boot Device          [Network:IBA GE Slo]
```

Specifies the boot sequence from the available devices.

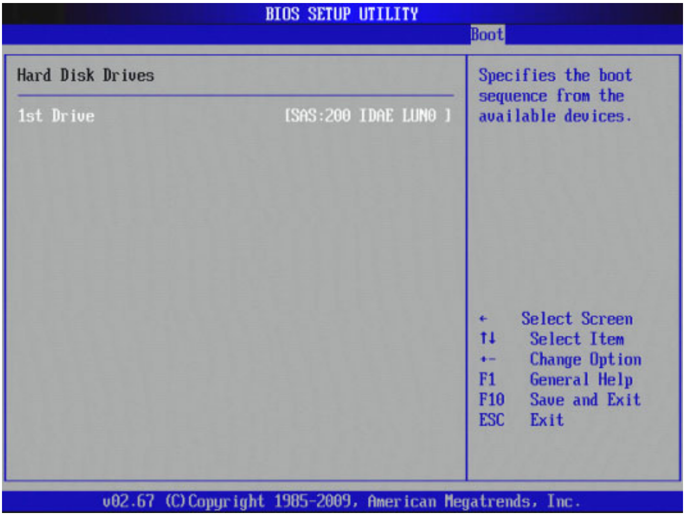
A device enclosed in parenthesis has been disabled in the corresponding type menu.

←   Select Screen
↑↓   Select Item
+-   Change Option
F1   General Help
F10 Save and Exit
ESC Exit
v02.67 (C)Copyright 1985-2009, American Megatrends, Inc.

- 1st Boot Device
- 2nd Boot Device
- 3rd Boot Device
- 4th Boot Device

Hard Disk Drives

Figure 3-158. Hard Disk Drives



BIOS SETUP UTILITY
Boot

Hard Disk Drives

1st Drive [SAS:200 IDAE LUN0]

Specifies the boot sequence from the available devices.

← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit
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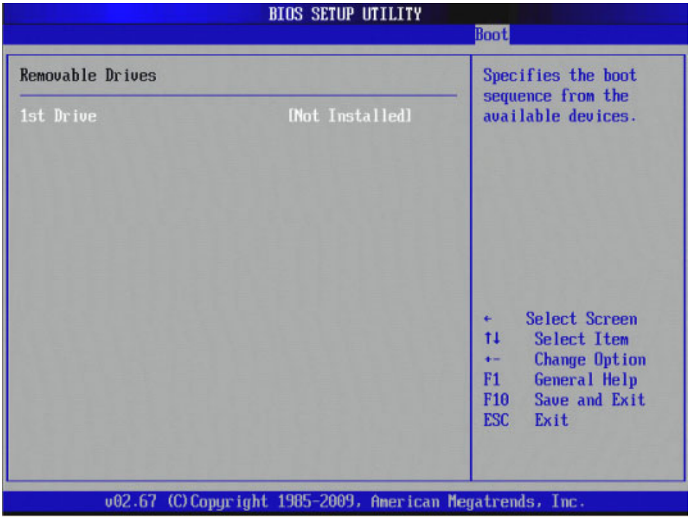
This feature allows you to specify the boot sequence from all available hard disk drives. The settings are Disabled and a list of all hard disk drives that have been detected.

- 1st Drive

Removable Drives

Figure 3-159. Removable Drives



BIOS SETUP UTILITY

Boot

Removable Drives

1st Drive [Not Installed]

Specifies the boot sequence from the available devices.

← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit

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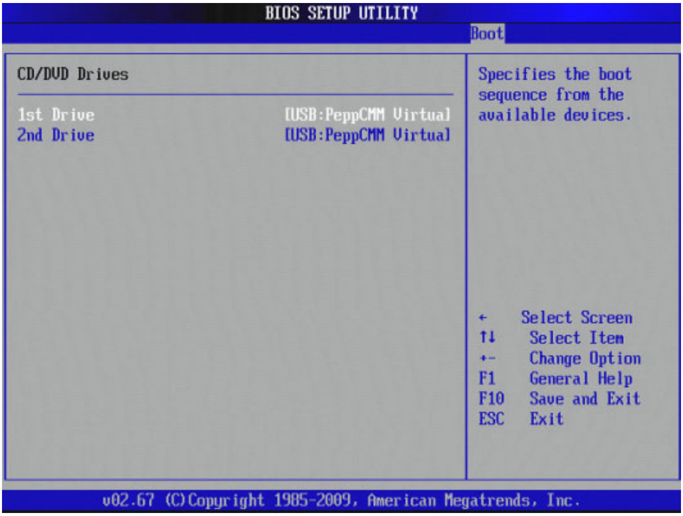
This feature allows you to specify the boot sequence from all available removable drives.

CD/DVD Drive

Figure 3-160. CD/DVD Drive



BIOS SETUP UTILITY

Boot

CD/DVD Drives

1st Drive [USB:PeppCMM Virtual]
2nd Drive [USB:PeppCMM Virtual]

Specifies the boot sequence from the available devices.

← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit

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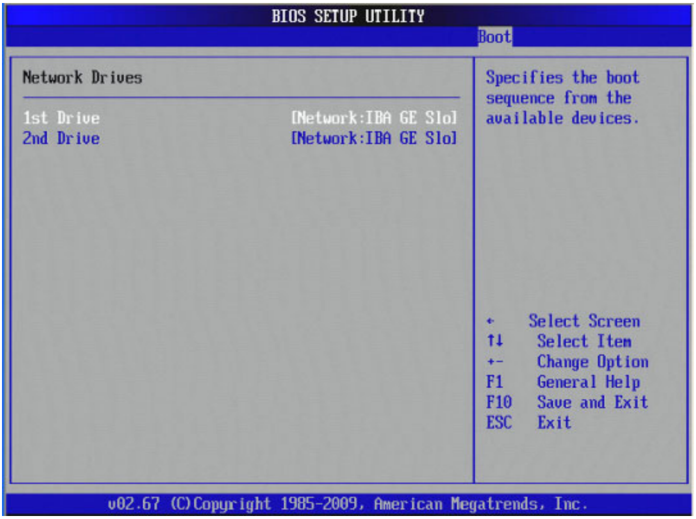
This feature allows you to specify the boot sequence from all available removable drives.

Network Drives

Figure 3-161. Network Drives


BIOS SETUP UTILITY
Boot
← Select Screen
↑↓ Select Item
+- Change Option
F1 General Help
F10 Save and Exit
ESC Exit

Network Drives

1st Drive [Network:IBA GE Slo]

2nd Drive [Network:IBA GE Slo]

Specifies the boot sequence from the available devices.

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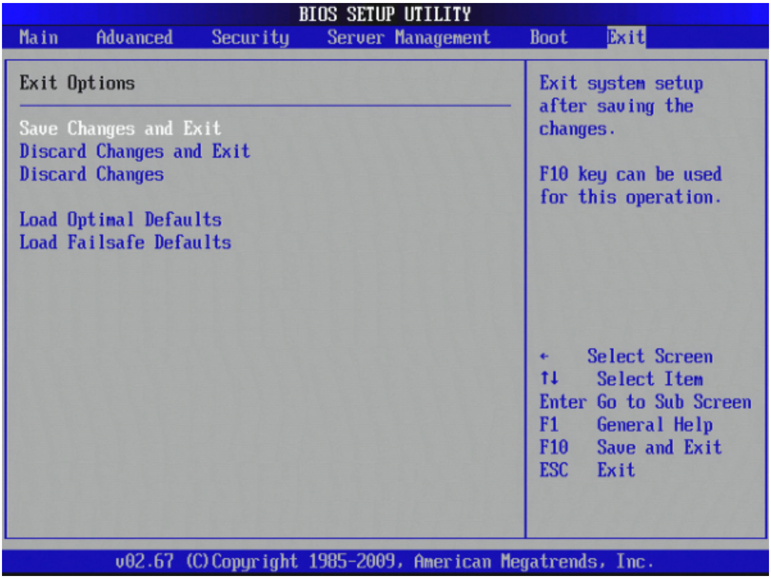
This feature allows you to specify the boot sequence from available network drives.

Exit Options

Figure 3-162. Exit Setup Menu



Exit Options

Save Changes and Exit
Discard Changes and Exit
Discard Changes

Load Optimal Defaults
Load Failsafe Defaults

Exit system setup after saving the changes.

F10 key can be used for this operation.

← Select Screen
↑↓ Select Item
Enter Go to Sub Screen
F1 General Help
F10 Save and Exit
ESC Exit

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Save Changes and Exit: When you have completed the system configuration changes, select this option to leave the BIOS Setup Utility and reboot the computer, so the new system configuration parameters can take effect. Select **Save Changes and Exit** from the Exit menu and press <**Enter**>.

Discard Changes and Exit: Select this option to quit the BIOS Setup Utility without making any permanent changes to the system configuration, and reboot the computer. Select **Discard Changes and Exit** from the Exit menu and press <**Enter**>.

Discard Changes: Select this option and press <**Enter**> to discard all the changes and return to the BIOS Setup Utility.

Load Optimal Defaults: To set this feature, select **Load Optimal Defaults** from the Exit menu and press <**Enter**>. Then, select **OK** to allow the BIOS to automatically load optimal defaults to the BIOS settings. The Optimal settings are designed for maximum system performance, but may not work best for all computer applications.

Load Fail-Safe Defaults: To set this feature, select **Load Fail-Safe Defaults** from the Exit menu and press <**Enter**>. The Fail-Safe settings are designed for maximum system stability, but not for maximum performance.

AB2x280 F1 Onboard SATA RAID Configuration

This section briefly shows how to create RAID volume with Intel and Adaptec onboard SATA RAID.

Enabling Intel onboard SATA RAID

1. Turn on the server and the display monitor. If the server is already turned on, please close all open applications and then restart the server.
2. During POST, press **F2** to access the BIOS Setup Utility.
3. Select the **Advanced > IDE/SATA Configuration** submenu.
4. Change the setting of the **Configure SATA#1 as** field from IDE to **RAID**.
5. Select **Intel** from the **ICH Raid CodeBase** option.
6. Press **F10** and select **Ok** to save the setting and close the Setup Utility.

Entering Intel onboard SATA RAID Configuration Utility

To start Intel onboard SATA RAID Configuration Utility, press **CTRL-I** when you see the RAID BIOS during POST. After POST finished, the Intel (R) Matrix Storage Manager option ROM displays on the screen.

Loading Factory Default Setting

1. In the Configuration menu, select third option **Reset Disks to Non-RAID**. The current adapter settings appear. Please click on **Next** to change the setting.
2. Select the hard disk drive that should be reset and press **ENTER** to complete your selection.
3. Then press **Y** to reset RAID data on selected hard disks.

Creating a RAID Volume

1. Select Create RAID Volume.
2. The **CREATE VOLUME MENU** displayed.
3. Type in the name of RAID volume.
4. Select RAID level.

5 Select desired HDD to create the RAID.

6 Select **Create Volume**.

7 Press **Y** when "Are you sure you want to create the volume? (Y/N):" displayed.

8 Now the RAID volume is created, you can press **ESC** and select **Exit** to exit.

Initialing a RAID Volume

During Intel onboard SATA RAID volume creation process, the onboard SATA RAID volume will be automatically initiated once the onboard SATA RAID volume has been created.

Assigning a Hot Spare Drive

The Intel onboard SATA RAID Configuration Utility in POST does not provide the function to assign a hot spare drive. Please assign a hot spare drive with Intel onboard SATA RAID utility installed in operating system.

Enabling Adaptec onboard SATA RAID

1 Turn on the server and the display monitor. If the server is already turned on, please close all open applications and then restart the server.

2 During POST, press **F2** to access the BIOS Setup Utility.

3 Select the **Advanced > IDE/SATA Configuration** submenu.

4 Change the setting of the **Configure SATA#1 as** field from IDE to **RAID**.

5 Select **Adaptec** in the **ICH Raid CodeBase** option.

6 Press **F10**.

7 Select **Ok** to save the setting and close the Setup Utility.

Entering Adaptec onboard SATA RAID Configuration Utility

To start Adaptec onboard SATA RAID Configuration Utility, please press **CTRL-A** when you see the RAID BIOS during POST. After POST finished, the Adaptec RAID Configuration Utility displays on the screen.

Loading Adaptec Factory Default Setting

Adaptec onboard SATA RAID utility does not provide an option for factory default setting. To reset onboard SATA RAID volume related configurations, please delete the existing onboard SATA RAID volumes.

Creating an Adaptec RAID Volume

1. Select the Array Configuration Utility option.
2. Select **Create Array**.
3. The Select drives to create Array displays.
4. Select the required hard drive disk and then press **INS** to add it in Selected Drives area.
5. Press **Enter** to complete the selection.
6. Select **Array Type**.
7. Configure the array properties.
8. Press **Done** when finish.
9. Press **Y** when "Do you want to create an array? (Yes/No):" displays.
10. Press any key to continue.
11. Now the RAID volume is created, you can press **ESC** to exit.

Initialing an Adaptec RAID Volume

During Adaptec onboard SATA RAID volume creation process, the Adaptec onboard SATA RAID volume will be automatically initiated once the onboard SATA RAID volume has been created.

Assigning an Adaptec Hot Spare Drive

A hot spare is a hard disk drive that automatically replaces any failed drive in a RAID volume, and can subsequently be used to rebuild the RAID volume.

1. Select the Array Configuration Utility option.
2. Select **Add/Delete Hotspare**.
3. The **Select drives to assign Spare** displayed.
4. Select desired hard drive disk and then press **INS** to add it in Assigned Hotspare drives area.
5. Press **Enter** to complete the selection.

6 Press **Y** when "Do you want to create a spare? (Yes/No):" displays.

7 Now a hot spare drive is created, you can press **ESC** to exit.

4 Networking Switch Modules

Acer 1/10Gb Ethernet Switch Module

This chapter covers the setup and installation of the 1/10Gb Ethernet switch modules.

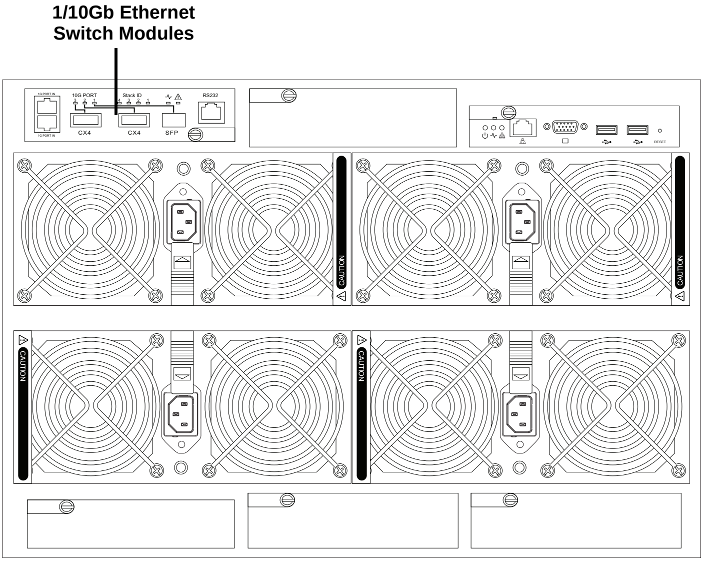
The Acer 1/10Gb Ethernet switch module is a 1-Gbps Ethernet switch with three external 10-Gbps uplink and two external 1-Gbps Ethernet uplink ports.

Installing/Removing a Switch Module

Installing a Switch Module

1. Make sure the cover to the module has been installed before proceeding. Follow the anti-static precautions described in “Electrostatic discharge precautions” on page vii.
2. Remove the dummy cover from the bay you want to place the module in.
3. Place the module's release handle in the open position.
4. Slide the module into the module bay until it stops (see the following table).

Figure 4-163. Switch Module Location


1/10Gb Ethernet Switch Modules
1G PORT IN
10G PORT
Stack ID
RS232
CX4
CX4
SFP
1G PORT IN
RESET
CAUTION
CAUTION
CAUTION
CAUTION

5. Push the release handle to the closed position.

Note: After the module has been installed and the handle locked, it will turn on and a POST test will run to verify it is working properly. If there are no problems the blue Init. OK LED on the module will illuminate and you will see an OK under INITIATED in the GBE SWITCH screen of the management software utility.

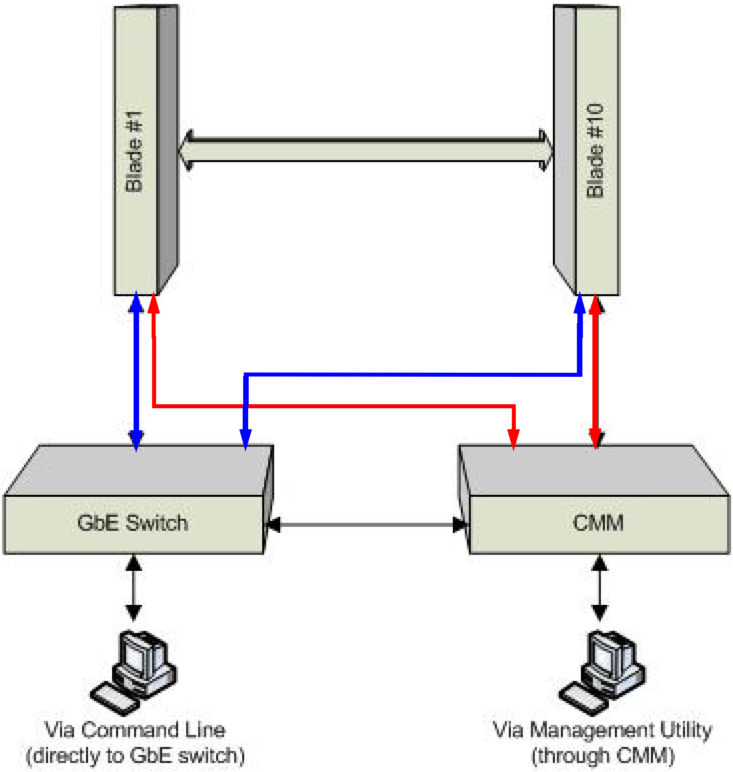
Note: If the module is installed in a top bay it must be positioned upside-down.

Removing a Switch Module

1. Pull out the release handle to the open position.
2. Pull the module out of the bay.
3. Replace immediately with another module or with a dummy module cover to maintain airflow integrity.

Configuring the Switch Module

Figure 4-164. Configuring the Switch Module


Blade #1
Blade #10
GbE Switch
CMM
Via Command Line
(directly to GbE switch)
Via Management Utility
(through CMM)

A Gigabit Ethernet switch module can be configured using two methods (as shown in Figure 4-164). You may configure it:

- Through the Acer Smart Blade Console or Acer Smart Blade Manager (via the CMM module)
- Directly through a command line (using a telnet interface or a serial console)

The Acer Smart Blade Console and Acer Smart Blade Manager access the switch module through the CMM module. To access it directly, use the command line.

Note that any port may be configured as *up* (active) or *down* (inactive). All ports are active by default.

Network Connection

Use the procedure below to connect and login to the Acer Smart Blade Console.

Logging In to the Acer Smart Blade Console:

1. Connect a PC to a network that is accessible to the switch.

   For example, connect a PC to any of the front panel ports of the switch and make sure the PC has an IP address on the same subnet as the switch management IP.
2. Type the IP address of the switch that you want to connect to in the address bar of your browser, and hit <ENTER>. Once the connection is made, the LOGIN screen displays

Note: The default username is **root** and the default password is **superuser**. The Default IP address is **192.168.100.102**.

Address Defaults

The following are the default addresses that are initially set. Afterwards, you can change these values within the program.

Address	Default Setting
Default IP Address	192.168.100.102
Default Acer Address	192.168.100.1
Default Subnet Mask	255.255.255.0

Note: If two switches are installed in a AB7000 system, you will have to change the IP address of one from the default so that both switches have unique addresses.

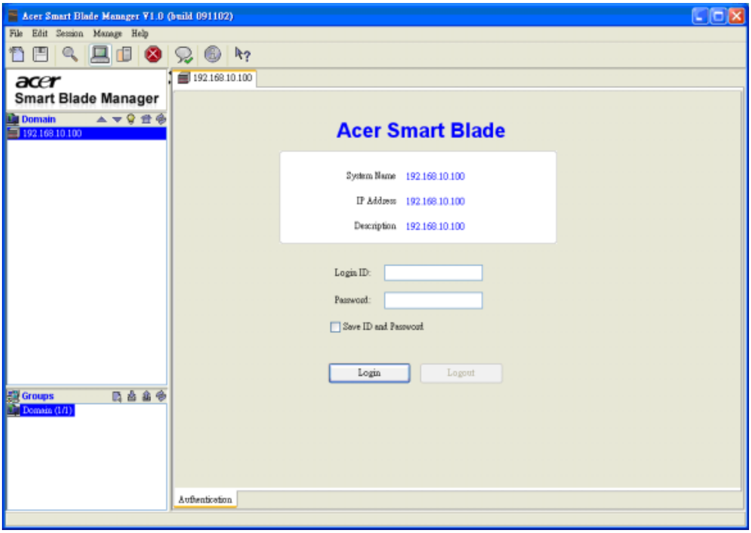
Acer Smart Blade Manager

Use the procedure below to login to the Acer Smart Blade Manager.

Logging In to the Acer Smart Blade Manager:

1. Launch the Acer Smart Blade Manager in your PC, the LOGIN screen displays.

Figure 4-165. Smart Blade Manager Login Screen


Acer Smart Blade Manager V1.0 (build 091102)
File
Edit
Session
Manage
Help
acer
Smart Blade Manager
Domain
192.168.10.100
Groups
Domain (1/1)
192.168.10.100
Acer Smart Blade
Login ID:
Password:
Save ID and Password
Login
Logout
Authentication

System Name 192.168.10.100

IP Address 192.168.10.100

Description 192.168.10.100

☐ Save ID and Password

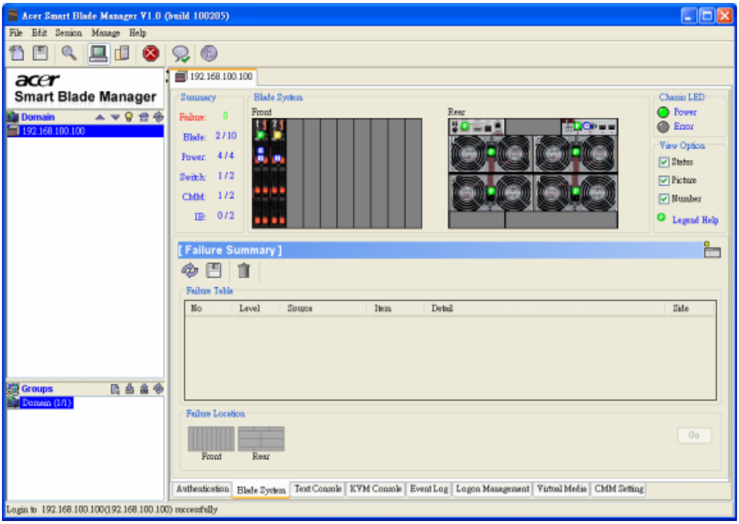
a. Type in your Username in the USERNAME box.

b. Type in your Password in the PASSWORD box and click on LOGIN.

Note: The default username is **root** and the default password is **superuser**. The Default IP address is **192.168.100.102**.

The Acer Smart Blade Manager screen is then displayed.

Figure 4-166. IPMI Blade System Screen

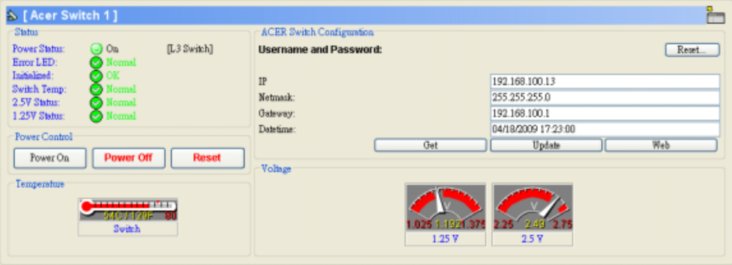

Acer Smart Blade Manager V1.0 (build 100205)
File Edit Session Manage Help
acer
Smart Blade Manager
Domain
192.168.100.100
Groups
Domain (1/1)
192.168.100.100
Summary
Blade System
Front
Rear
Chassis LED
Power
Error
View Option
☑ Status
☑ Picture
☑ Number
Legend Help
[Failure Summary]
Failure Table
No
Level
Source
Item
Detail
Side
Failure Location
Front
Rear
Go
Authentication
Blade System
Text Console
KVM Console
Event Log
Logon Management
Virtual Media
CMM Setting

Failure: 0
Blade: 2 / 10
Power: 4 / 4
Switch: 1 / 2
CMM: 1 / 2
IB: 0 / 2

Login to 192.168.100.100(192.168.100.100) successfully

2. Clicking on a gigabit switch module will display the gigabit switch in the Gigabit Switch panel on the screen. You may make changes in the configuration of the GbE switch module in this panel to your needs.

Figure 4-167. Gigabit Switch Panel


[Acer Switch 1]
Status
Power Control
Power On
Power Off
Reset
Temperature
54C / 129F 80
Switch
ACER Switch Configuration
Username and Password:
Reset...
Get
Update
Web
Voltage
1.025 1.192 1.375
1.25 V
2.25 2.49 2.75
2.5 V

Power Status: On [L3 Switch]
Error LED: Normal
Initialized: OK
Switch Temp: Normal
2.5V Status: Normal
1.25V Status: Normal

IP 192.168.100.13
Netmask: 255.255.255.0
Gateway: 192.168.100.1
Datetime: 04/18/2009 17:23:00

Address Defaults

The following are the default addresses that are initially set. Afterwards, you can change these values within the program.

Address	Default Setting
Default IP Address	192.168.100.102
Default Acer Address	192.168.100.1
Default Subnet Mask	255.255.255.0

Note: If two GbE switches are installed in a AB7000 system, you will have to change the IP address of one from the default so that both switches have unique addresses.

Command Line

Configuring the 1/10G Ethernet switch can be done using a command line via telnet or by using the serial console interface.

Accessing CLI through Telnet:

To access command line via telnet, follow the below steps.

1. Connect a PC to a network that is accessible to the switch.

   For example, connect a PC to any of the front panel ports of the switch and make sure the PC has an IP address on the same subnet as the switch management IP.

2. In the PC, start a telnet client session with the switch management IP (default IP is **192.168.100.102**).

   This brings up the switch's command line interface for user login.

3. Enter **username** and **password** to login to the switch.
4. To view the switch configurations use **show commands** and to configure the switch type **config term** to get access to the configuration commands. For help type **?** or **help**.

Accessing CLI through a Serial Console

To access command line via a serial console, follow the below steps.

1. Connect a PC serial port to the switch console port.
2. In the PC, open any seral port access applications, such as Hyperterminal or Term Term.

3. Choose the serial port connected with the switch and configure with the following parameters:

    Baudrate = 9600

    Data bits = 8

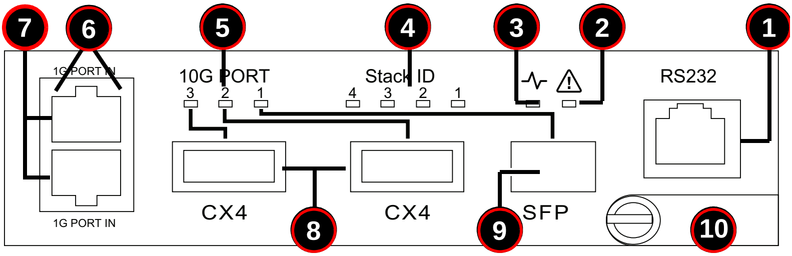
    Parity = None

    Stop bit = 1

4. This brings up the switch's command line interface for user login.
5. Enter username and password to login to the switch.
6. To view the switch configurations use **show commands** and to configure the switch type **config term** to get access to the configuration commands. For help type **?** or **help**.

Internal and External Structure

Figure 4-168. 1/10 Gigabit Ethernet Switch Module Ports and Indicators


7
6
5
4
3
2
1
1G PORT IN
10G PORT
3
2
1
Stack ID
4
3
2
1
RS232
1G PORT IN
CX4
8
CX4
9
SFP
10

Item	Description
1	RS-232 (COM) Serial Port
2	Module Fault LED
3	“Initiation OK” LED
4	Stack ID LEDs (4)
5	10-Gbps Uplink Port Status LEDs (3)
6	1-Gbps RJ45 Uplink Port Status LEDs (Link/Activity and Speed)
7	1-Gbps RJ45 Uplink Ports (2)
8	CX4 10-Gbps Uplink Ports (2)
9	SFP+ 10-Gbps Uplink Port
10	Module Release Handle

LED Indicators

LED	State	Description
RJ45 Link/Activity	Green	Solid denotes link established, no activity. Blinking denotes activity. Off indicates that no link is established.
RJ45 Speed	Amber/ Green/Off	Amber denotes 1 Gbps speed. Green denotes 100 Mbps speed. Off denotes 10 Mbps speed.
"Initiation OK" LED	Blue	Denotes successful initiation/OK status when solidly lit.
Module Fault LED	Red	Denotes SBM-GEM-001 module failure when solidly lit.
10G Port LEDs	Green	Denotes activity for 10Gbps port when solidly lit. Blinking green denotes data transmited (Tx) or received (Rx).
Stack ID LEDs	Green	Denotes Stack ID activity as shown in the following table.

Stack LED 4	Stack LED 3	Stack LED 2	Stack LED 1	Stacking Switch Identifier
OFF	OFF	OFF	ON	1
OFF	OFF	ON	OFF	2
OFF	OFF	ON	ON	3
OFF	ON	OFF	OFF	4
OFF	ON	OFF	ON	5
OFF	ON	ON	OFF	6
OFF	ON	ON	ON	7
ON	OFF	OFF	OFF	8

ON	OFF	OFF	ON	9
ON	OFF	ON	OFF	10
ON	OFF	ON	ON	11
ON	ON	OFF	OFF	12
ON	ON	OFF	ON	13
ON	ON	ON	OFF	14
ON	ON	ON	ON	15
OFF	OFF	OFF	OFF	16 / Stacking Disabled.

Ports

The 1/10 Gigabit Ethernet switch module contains several front-mounted ports as described below in the following table.

Port	Description
RS-232 Compatible Serial Port	This port accepts an connector cable for uplink using RS-232 connection to a console.
RJ45 Ethernet Ports	These two ports accept a RJ45 connector for 1-Gbps uplink communications.
CX4 10-Gbps Ports	These two ports accept a CX4 10GBase-CX4 connectors for 10-Gbps uplink communications.
SFP+ 10-Gbps Port	This port accepts a SFP+ Direct Attach connector for 10-Gbps uplink communications.

Web-based Management Utility

The firmware for the Ethernet switch module resides on a chip on the PCB.

The switch has internal flash memory in two areas to hold two firmware images. The flash area used for the normal firmware image is referred to as the *normal* area. The other flash area, referred to as the *fallback* area, is used to store the firmware image for fallback purpose in case of a failure to boot from the normal area.

Overview

The Acer switch utility for the 1/10 Gigabit Ethernet switch modules provides a web-based interface for managing layer2 and layer3 switching at wire speed for constructing a switched/routed network. This interface provides both a bridging functionality and advanced features such as link aggregation, Dynamic VLAN/Dynamic Multicast, IGMP Snooping and Network Access Control. This web-based interface also comes with several Layer3 features as well (such as wire speed routing, Differentiated services, multicast routing and so on).

The Acer Switch firmware is implemented using open sources from OpenSSL, OpenSSH and other open source communities and is configured using web browsers such as Internet Explorer.

The utility starts with a default IP address, which is also the management IP address. This IP address is essentially provided for remote management of this switch. For managing the switch through web browsers, type in the default IP address in your browser's web address in order to start accessing the switch.

For example, if the management IP address of the switch is **192.168.1.1,** the switch can be accessed through the Web browser by typing http://192.168.1.1 in the address space of the web browser.

The default management IP address for Acer Switch products is **192.168.100.102**. This default IP address can be changed in the SYSTEM SETTINGS page in the System Management section.

The switch can be managed with the default IP through CMM Ethernet connections, since the internal management Ethernet ports are connected with CMM Ethernet ports internally. If you prefer to manage the switch through front panel ports or through any other switching ports, then you can assign the desired management IP address to VLAN 1. Alternatively, you can create any VLAN and manage the switch through switching ports. Here the term switching ports refer to all internal and external 1G and 10G ports of the switch.

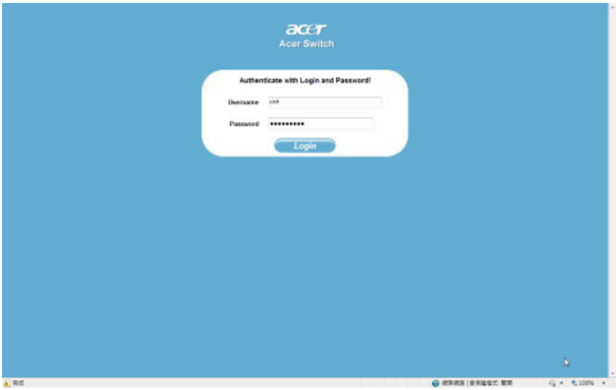
Nomenclature

The following nomenclature applies to screens found in this chapter:

- **Port */*** – This indicates the stacking ID number, port number
- **Port Number GB */*** – This is for an internal port
- **Port Number Ext */*** – This is for an external port.

Login

Figure 4-169. Acer Swtich Login



Authenticate with Login and Password!

Username

Password ••••••••••

The initial login page is used to login to the Acer Switch web-based management utility for 10-Gbps switches. To login, enter your **User Name** and **Password** in the fields provided and press the LOGIN button.

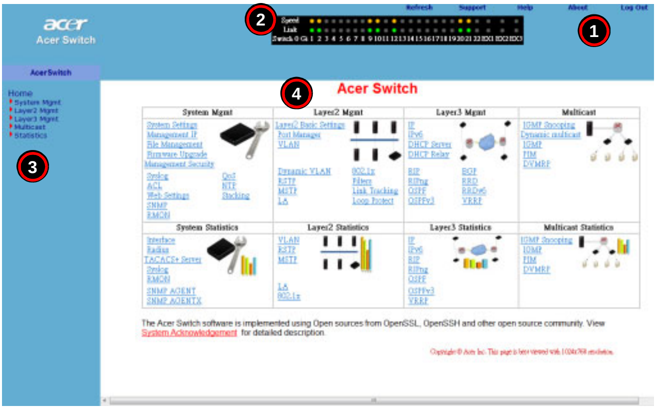
This User Name and Password are both used for accessing the switch through the web for switch configuration. The entered user name and password are validated at the switch end.

After logging in, you will be taken to the HOME page of the utility. See “Home Page” on page 277 for further details.

Home Page

The HOME page contains links and menus for going to all other control pages in the Acer Switch web-based interface utility. A list of controls for this page is shown in the following table. The basic page structure of the HOME page is duplicated for all subsequent sub-pages of the Acer Switch web-based interface utility.

Figure 4-170. Acer Switch Home Page


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 XG1 XG2 XG3
1
2
3
4
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Acer Switch
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
NTP
Stacking
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
IP
IPv6
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
IGMP Snooping
Dynamic multicast
IGMP
PIM
DVMRP
System Statistics
Interface
Radius
TACACS+ Server
Syslog
RMON
SNMP AGENT
SNMP AGENTX
Layer2 Statistics
VLAN
RSTP
MSTP
LA
802.1x
Layer3 Statistics
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
Multicast Statistics
IGMP Snooping
IGMP
PIM
DVMRP

The Acer Switch software is implemented using Open sources from OpenSSL, OpenSSH and other open source community. View System Acknowledgement for detailed description.

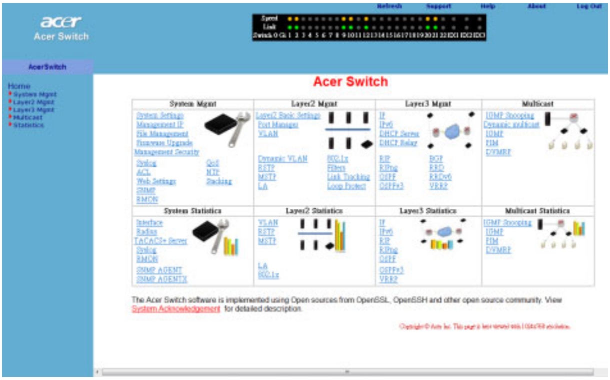
Copyright © Acer Inc. This page is best viewed with 1024x768 resolution.

Item	Name	Description
1	Top Page Links	The Top Page Links are present both on the Home page and all other pages accessed and contain links to support pages or additional controls for all pages viewed with the Web Management Utility. See “Top Page Links” on page 278 for further details.
2	Top ED L Display	This section of the screen provides an overview port status for the switch. See “Top LED Display” on page 279 for further details.
3	Left Side Tree	The Left Side Tree contains an expandable list of links for you to use to get to other management pages. All configuration pages contain this navigation tree.

Item	Name	Description
4	Middle Configuration Links Table	Each configuration page contains its own links and controls

The HOME page is displayed on successful validation of the user name and password. The information in this page presents a brief overview of the switch web-based management utility.

Figure 4-171. System Managment Page


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Acer Switch
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
NTP
Stacking
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
IP
IPv6
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
IGMP Snooping
Dynamic multicast
IGMP
PIM
DVMRP
System Statistics
Interface
Radius
TACACS+ Server
Syslog
RMON
SNMP AGENT
SNMP AGENTX
Layer2 Statistics
VLAN
RSTP
MSTP
LA
802.1x
Layer3 Statistics
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
Multicast Statistics
IGMP Snooping
IGMP
PIM
DVMRP

The Acer Switch software is implemented using Open sources from OpenSSL, OpenSSH and other open source community. View System Acknowledgement for detailed description.

Top Page Links

On the top of all pages of the web-based management utility you can find the following PAGE HEADER links:

- **Refresh –** Click this link to refresh the contents of the page. Unlike the browser refresh button, this link refreshes only the contents of the middle of the page which has the active data.
- **Support** – Click this link to get technical support for Acer Products.
- **Help** – Click on this link to open a context specific help page that covers all the items on the page being viewed.
- **About** – Click this link to get additional information about the web-based management utility, the switch and also the versions supported.
- **Log Out** – Click this link to log out of the web session and go back to the Login page.

Top LED Display

This part of the screen displays the **Port Status**, **Speed** and **Link Status** for every port of the switch.

- Sixteen Gigabit Ethernet (Gi) ports and three 10-Gigabit Ethernet (Ex - Extreme Ethernet) ports.

Note that Ex ports configured as stacking ports will not be displayed.

In stacking, the **Switch Identifier** will be displayed on top of this LED display. This allows you to select a stack member switch of interest, and to view the LED display for the corresponding switch.

For **Link**, a green light corresponding to a number indicates that that numbered port is up, whereas a red light corresponding to a number indicates that this port is down.

Left Side Tree

The tree display on the left side of the page provides quick access to the configuration pages. This tree is organized based on the features supported in the switch. The main features are categorized in the following groups.

- System Management - System based configurations
- Layer 2 Management - Layer 2 Protocols including VLAN, RSTP, MSTP, …
- Layer 3 Management - Layer 3 Protocols including - IP, RIP, OSPF, ….
- Multicast Management - Multicast Protocols including IGMP, PIM, …
- Statistics - Statistics and Counters for all the features.

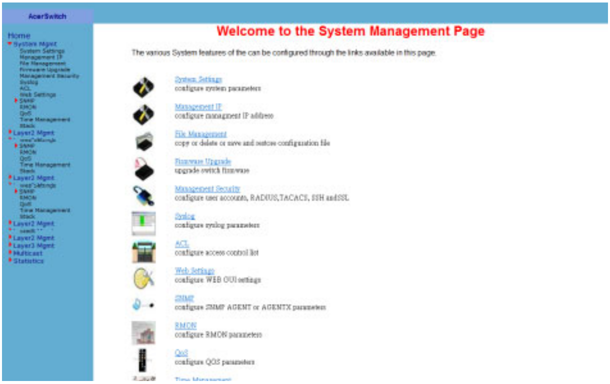
This tree is displayed on the left navigation pane on all configuration pages. This makes it easier for you to choose any configuration page directly without going back to the home page every time. To go to one of a MANAGEMENT page's sub-pages, click on the ▶ symbol to expand the list.

Middle Configuration Link Table

This section of the page displays a table of links to all major configurations. This table provides links similar to the Left Side Tree links. The configuration links are categorized based on features of the switch.

System Management Page

Figure 4-172. System Management Page


AcerSwitch
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

Welcome to the System Management Page

The various System features of the can be configured through the links available in this page.

System Settings
configure system parameters

Management IP
configure managment IP address

File Management
copy or delete or save and restore configuration file

Firmware Upgrade
upgrade switch firmware

Management Security
configure user accounts, RADIUS,TACACS, SSH andSSL

Syslog
configure syslog parameters

ACL
configure access control list

Web Settings
configure WEB GUI settings

SNMP
configure SNMP AGENT or AGENTX parameters

RMON
configure RMON parameters

QoS
configure QOS parameters

Time Management

The SYSTEM MANAGEMENT page contains the following links:

- “System Settings” on page 281
- “System Version” on page 283
- “File Management” on page 284
- “Firmware Upgrade” on page 286
- “Management Security” on page 286
- “Syslog” on page 296
- “ACL” on page 299
- “WEBGUI Settings” on page 304
- “SNMP” on page 305
- “RMON” on page 317
- “QoS” on page 323
- “NTP Settings” on page 328
- “Stack” on page 330

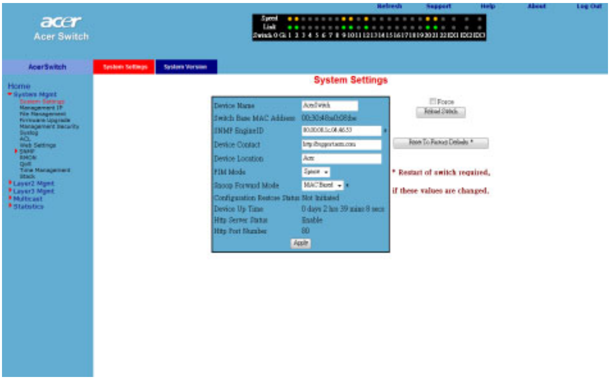
System Settings

The following pages can be accessed through the System Settings link:

- "System Settings" on page 281
- "System Version" on page 283

System Settings

Figure 4-173. System Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
System Settings
System Version
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
System Settings
☐ Force
Reload Switch
Reset To Factory Defaults *
Apply

Configuration Restore Status Not Initiated
Device Up Time 0 days 2 hrs 39 mins 8 secs
Http Server Status Enable
Http Port Number 80

* Restart of switch required, if these values are changed.

Clicking the SYSTEM INFORMATION tab brings up the SYSTEM SETTINGS page. This page provides system related information and also helps you configure system specific parameters. The following table lists the parameters found on this page.

Parameter	Description
Device Name	A configurable name can be entered into this field for the switch.
IP address mode	Either Manual or Automatic mode can be set for this parameter.
Subnet Mask	Use this parameter to configure the subnet mask.
SNMP Engine ID	This configures the SNMP Engine Identifier.
Device contact	Use this parameter to change the device contact.

Parameter	Description
Device Location	Use this parameter to change the device location.
PIM Mode	Use this to configure the PIM status of the switch.
Snoop forwarding Mode	You can use this parameter to change the Snoop Fowarding Mode between MAC based and IP based.
Switch Start MAC address	This is a display for the Switch Start MAC address.
Configuration Restore Status	This is a display for the Configuration Restore Status
Device Up Time	This is a display for the Device Up Time.
HTTP Server Status	This is a display for the HTTP Server Status.
HTTP Port Number	This is a display for the HTTP Port Number.

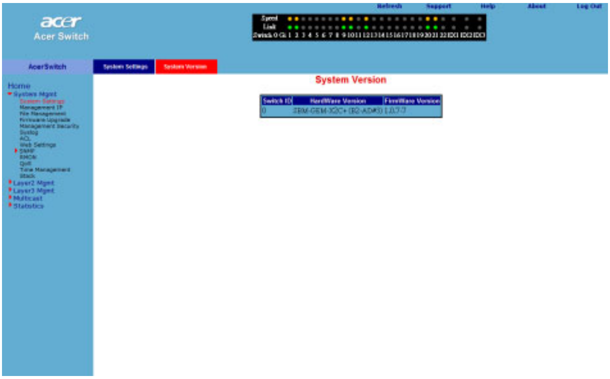
This page also has a control to **Reset To Factory Defaults**. This clears all switch configuration and local user accounts information. This reset requires reboot of the switch.

Warning! **Make sure to have all necessary configurations backed up before doing "Reset To Factory Defaults".**

This page also provides a control to **Reboot** the switch. In stacking, the Switch Identifier is displayed on top of this reboot button. You can select the interested stack member switch to reboot the corresponding switch. You can also select the **ALL** option to reboot all stack members.

System Version

Figure 4-174. System Version


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
System Settings
System Version
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

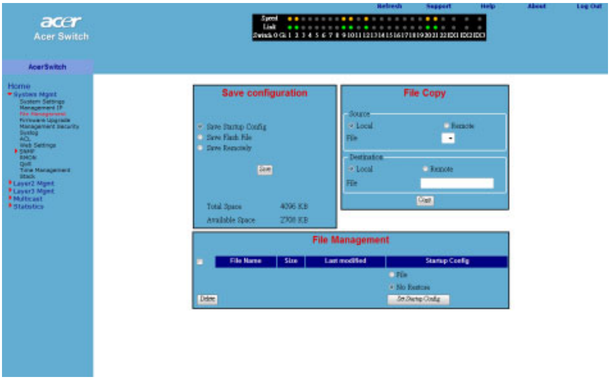
System Version

Switch ID	HardWare Version	FirmWare Version
0	SBM-GEM-X2C+ (B2-AD#3)	1.0.7.7

Clicking the SYSTEM VERSION tab brings up the SYSTEM VERSION page. This page displays the hardware and firmware version of the switch.

File Management

Figure 4-175. File Management


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 IDX1 IDX2 IDX3
AcerSwitch
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Save configuration
Save Startup Config
Save Flash File
Save Remotely
Save
File Copy
Source
Local
Remote
File
Destination
Local
Remote
File
Copy
File Management
File Name
Size
Last modified
Startup Config
File
No Restore
Delete
Set Startup Config

Total Space 4096 KB
Available Space 2708 KB

Clicking the FILE MANAGEMENT link brings up the FILE MANAGEMENT page. The FILE MANAGEMENT page helps you to manage the configuration files in the switch. This page provides three main features.

- Save Configuration
- File Copy
- File Management

Save Configuration

You can save a currently running switch configuration in the following three ways:

- **Save Startup Config** - This option saves the currently running configuration in a local flash file with the file name configured as a "startup configuration" file.
- **Save Flash File** - This option saves the currently running configuration in local flash file with a user specified file name.
- **Save Remotely** - This option saves the currently running configuration into a remote TFTP server. You need to provide the IP address and file name of the TFTP server for this option.

The total configuration memory space and available free space are also displayed for your reference.

File Copy

You can copy a local file to or from a remote TFTP server. This feature is useful to create a backup of configuration files remotely, and also to download configuration files from remote computers to the switch. You need to provide a local file name and also the remote TFTP server's IP address and file name for this feature.

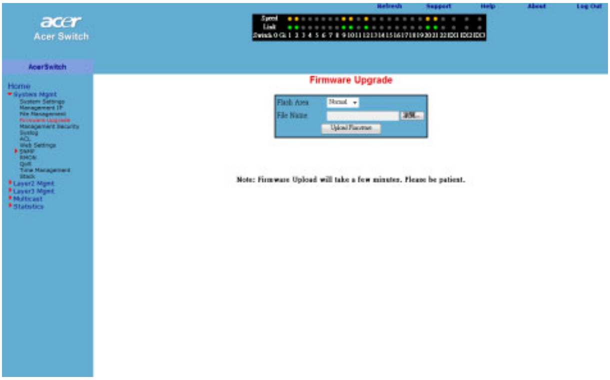
File Management

This section displays information about the configuration files stored in the switch and allows you to do any of the following actions:

- You can select one or more files and delete them.
- You can choose a Startup Configuration file from this file list.
- You can choose the FILE option and enter a name for a Startup Configuration file.
- You can also choose the NO RESTORE option for not loading any configuration files on the next reboot of the switch.

Firmware Upgrade

Figure 4-176. Firmware Upgrade


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 IDX1 IDX2 IDX3
AcerSwitch
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Upload Firmware

Firmware Upgrade

Flash Area: Normal

File Name:

Note: Firmware Upload will take a few minutes. Please be patient.

Clicking the FIRMWARE UPGRADE link brings up the FIRMWARE UPGRADE page. This page allows you to upgrade the firmware in normal or fallback memory. In stacking, the firmware is upgraded in all stack members automatically.

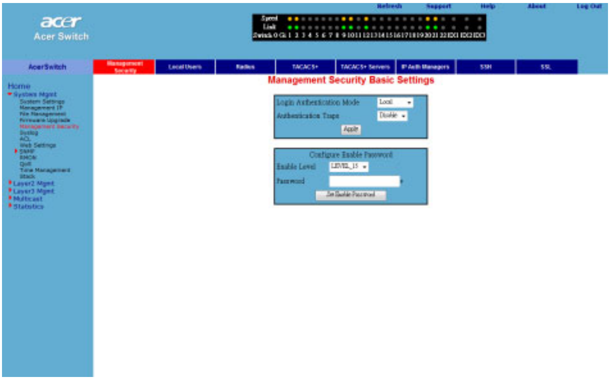
Management Security

The MANAGEMENT SECURITY link provides configuration for the following features:

- “Management Security Basic Settings” on page 287
- “Management User Account” on page 288
- “Radius” on page 289
- “TACACS+ Global Settings” on page 290
- “TACACS+ Server Configuration” on page 291
- “IP Authorized Manager” on page 292
- “SSH Configuration” on page 294
- “SSL Configuration” on page 295

Management Security Basic Settings

Figure 4-177. Management Security Basic Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
Management Security
Local Users
Radius
TACACS+
TACACS+ Servers
IP Auth Managers
SSH
SSL
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply
Set Enable Password

Management Security Basic Settings

Login Authentication Mode: Local
Authentication Traps: Disable

Configure Enable Password
Enable Level: LEVEL_15
Password:

Clicking the MANAGEMENT SECURITY tab brings up the MANAGEMENT SECURITY BASIC SETTINGS page. This page allows you to setup the below listed basic security parameters see the following table.

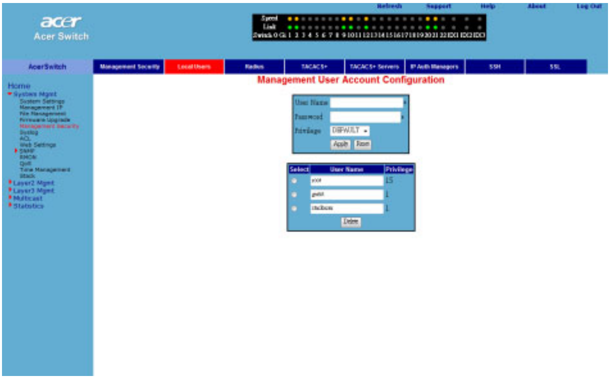
Parameter	Description
Authentication mode	Use this parameter to choose the mode of authentication for management access. By default the management access is authenticated with LOCAL user accounts information. However you can choose to authenticate using *Radius* or *TACACS* instead.
Authentication traps	You can enable SNMP Traps for SNMP access authentication events using this parameter..

Administrative users can also create *Enable Passwords* in this page. Low privilege users can use these Enable Passwords in the WEB SETTINGS page to enable access to privilege configurations.

Administrative users can set an *Enable Password* for all privilege levels. By default, the Enable Password is set only for the highest level (Level_15). This default password is the same as the default password set for the root user login.

Management User Account

Figure 4-178. Management User Account Configuration


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
Management Security
Local Users
Radius
TACACS+
TACACS+ Servers
IP Auth Managers
SSH
SSL
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply
Reset
Delete

Management User Account Configuration

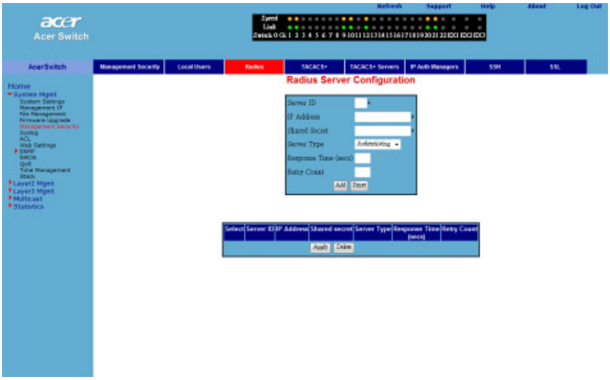
User Name
Password
Privilege DEFAULT

Select	User Name	Privilege
○	root	15
○	guest	1
○	[illegible]	1

Clicking the LOCAL USERS tab brings up the MANAGEMENT USER ACCOUNT CONFIGURATION page. This page allows you to create or delete local user accounts. You need more than privilege Level_5 to view all pages and need more than privilege Level_10 for changing the configurations. The highest, Level_15, is for Administrator privilege.

Radius

Figure 4-179. Radius Server Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 IDX1 IDX2 IDX3
AcerSwitch
Management Security
Local Users
Radius
TACACS+
TACACS+ Servers
IP Auth Managers
SSH
SSL
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Radius Server Configuration
Server ID
IP Address
Shared Secret
Server Type
Authenticating
Response Time (secs)
Retry Count
Add
Reset
Select
Server ID
IP Address
Shared secret
Server Type
Response Time (secs)
Retry Count
Apply
Delete

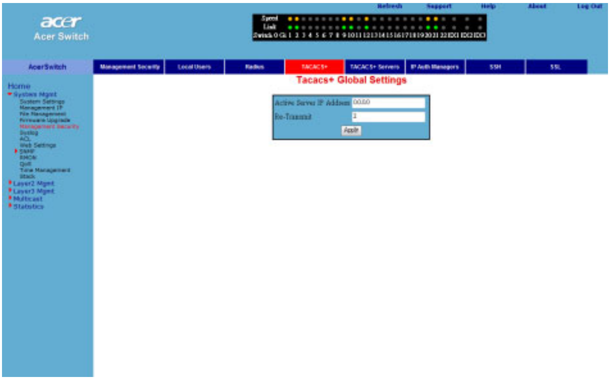
Clicking the RADIUS tab brings up the RADIUS SERVER CONFIGURATION page. This page allows you to configure the RADIUS server parameters as shown in the following table.

Parameter	Description
Server ID	This parameter specifies the unique identifier of the Radius Server Entry.
IP Address	This parameter specifies the IP Address of the Radius Server.
Shared Secret	Use this parameter to specify the secret string, which is to be shared between the Radius Server and the Radius Client.
Server Type	This parameter specifies the following RADIUS server type • *Authentication* • *Accounting* • *Both* (*Authentication* and *Accounting*).

Parameter	Description
Response Time (secs)	This parameter specifies the maximum time that the Radius Server has to respond for a request from the Radius Client.
Retry Count	This parameter specifies the maximum number of times a radius request is re-transmitted before getting a response from the Radius Server.

TACACS+ Global Settings

Figure 4-180. TACACS+ Global Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 IDC1 IDC2 IDC3
AcerSwitch
Management Security
Local Users
Radius
TACACS+
TACACS+ Servers
IP Auth Managers
SSH
SSL
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Tacacs+ Global Settings
Apply

Active Server IP Address 0.0.0.0
Re-Transmit 1

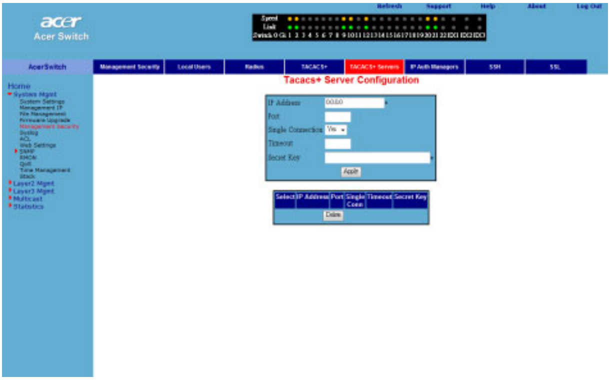
The TACACS+ GLOBAL SETTINGS page allows you to configure TACACS retries and choose an active TACACS server. The parameters for this page are shown in the following table.

Parameter	Description
Active Server IP Address	This parameter specifies the IP address of the active TACACS server. This server should have been already configured in the following TACACS+ SERVER CONFIGURATION page.

Parameter	Description
Retries	This parameter determines the number of times the switch searches the active TACACS server from the list of servers maintained. The allowed values are between *1* to *100*.

TACACS+ Server Configuration

Figure 4-181. TACACS+ Servers


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
Management Security
Local Users
Radius
TACACS+
TACACS+ Servers
IP Auth Managers
SSH
SSL
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply
Delete

Tacacs+ Server Configuration

IP Address: 0.0.0.0
Port:
Single Connection: Yes
Timeout:
Secret Key:

Select	IP Address	Port	Single Conn	Timeout	Secret Key

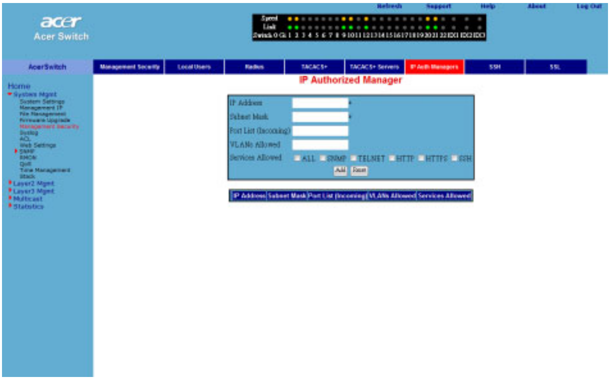
Clicking the TACACS+ SERVERS tab brings up the TACACS+ SERVER CONFIGURATION page, which allows you to configure TACACS servers. The parameters for this page are shown in the following table.

Parameter	Description
IP Address	This parameter specifies the IP address of the TACACS server.
Port	Use this parameter to specify the TCP port for TACACS protocol.

Parameter	Description
Single Connection	Specify *Yes* or *No* for a single TCP connection. If *Yes*, it establishes only a single TCP connection with a given TACACS server.
Timeout	The time for which the switch will wait for a response from the TACACS server before closing the connection is specified with this parameter. It is configurable in seconds, with the default as 5-seconds.
Secret Key	This parameter specifies the encryption key for the given TACACS server.

IP Authorized Manager

Figure 4-182. IP Auth Manager

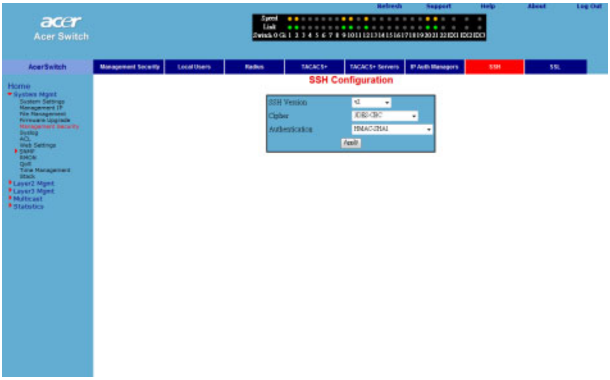

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 IDC1 IDC2 IDC3
AcerSwitch
Management Security
Local Users
Radius
TACACS+
TACACS+ Servers
IP Auth Managers
SSH
SSL
IP Authorized Manager
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
IP Address
Subnet Mask
Port List (Incoming)
VLANs Allowed
Services Allowed
☐ ALL ☐ SNMP ☐ TELNET ☐ HTTP ☐ HTTPS ☐ SSH
Add
Reset
IP Address
Subnet Mask
Port List (Incoming)
VLANs Allowed
Services Allowed

Clicking the IP AUTH MANAGER tab brings up the IP AUTHORIZED MANAGER page, which allows you to configure allowed management nodes for managing the switch. The parameters for this page are shown in the following table.

Parameter	Description
IP Address	This parameter specifies the IP address of the manager. An address 0.0.0.0 indicates “Any Manager”.
Subnet Mask	This parameter specifies the sub-network mask for the specified IP address.
Port List (Incoming)	This lists the port through which the manager can access this switch. Ports can be comma separated or provided as a range (for example 1,2,3 or 1-3 or 1,2-3).
VLANs Allowed	This parameter specifies the VLANs through which the manager can access this switch. VLANs can be comma seperated or provided as range (for example 1,2,3 or 1-3 or 1,2-3).
Services Allowed	These control buttons are used to indicate the service type, and can be one or more of the following: TELNET, SSH, HTTP, HTTPS, SNMP or ALL.

SSH Configuration

Figure 4-183. SSH Configuration


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
Management Security
Local Users
Radius
TACACS+
TACACS+ Servers
IP Auth Managers
SSH
SSL
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
SSH Configuration
Apply

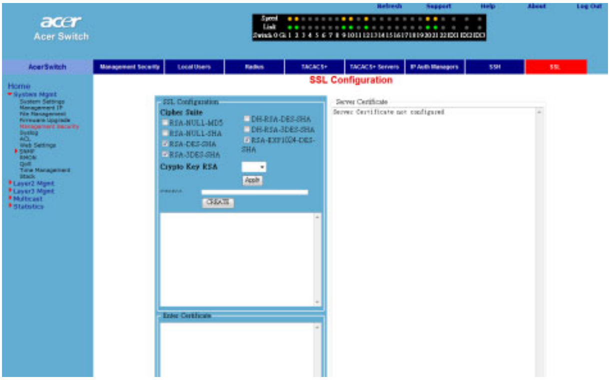
SSH Version: v2
Cipher: 3DES-CBC
Authentication: HMAC-SHA1

Clicking the SSH tab brings up the SSH CONFIGURATION page, which allows you to configure the SSH (Secure Shell) version and keys. The parameters for this page are shown in the following table.

Parameter	Description
SSH Version	The default for this parameter is **v2**. You can choose to configure this as compatible with *v1* instead.
Cipher	The default for this parameter is **3DES-CBC**. You can instead choose to configure it as *3DES-CBC* or *DES-CBC* or both
Authentication	This parameter's default is **HMAC-SHA1**. You can instead choose to configure it as *HMAC-SHA1* or *HMAC-MD5* or both.

SSL Configuration

Figure 4-184. SSL Configuration


acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
Management Security
Local Users
Radius
TACACS+
TACACS+ Servers
IP Auth Managers
SSH
SSL
Home
Apply
CREATE
Enter Certificate

SSL Configuration

SSL Configuration

Cipher Suite

☐ RSA-NULL-MD5
☐ RSA-NULL-SHA
☑ RSA-DES-SHA
☑ RSA-3DES-SHA
☐ DH-RSA-DES-SHA
☐ DH-RSA-3DES-SHA
☑ RSA-EXP1024-DES-SHA

Crypto Key RSA

Server Certificate

Server Certificate not configured

Clicking the SSL tab brings up the SSL CONFIGURATION page, which allows you to configure SSL (Secure Sockets Layer) parameters and generate SSL certificates for HTTPS. To configure SSL and enable HTTPS, follow the procedure below using this page.

Configuring SSL and Enabling HTTPS

1. Configure CIPHER SUITE and CRYPTO KEY RSA with your chosen parameters.
2. Create a certificate request by entering the subject name and clicking on the CREATE button.
3. When the page reloads, the text box below the CREATE button will display a certificate request. Copy and paste these contents to a text file that says **a.csr**.
4. To generate an SSL certificate, the **openssl** application can be used. The sub-steps below can be executed in any Linux machine to generate SSL certificates. For other *openssl* implementations, refer to the *openssl* documentation to find the equivalent steps for them.

a. Execute the below command in the Linux shell.

```
openssl req -x509 -newkey rsa:1024 -keyout
cakey.pem -out cGatewayt.pem
```

b. Execute the below command also in a Linux shell.

```
openssl x509 -req -in a.csr -out cert.pem -CA
cGatewayt.pem -CAkey cakey.pem -CAcreateserial
```

The above steps will generate the certificate file cert.pem.

5. Open the generated certificate file *cert.pem* and delete the first line (---BEGIN CERTIFICATE ---) and last line (----END CERTIFICATE--).
6. Join all the remaining lines as single lines to avoid line breaks being processed and copy/paste these joined texts in the ENTER CERTIFICATE text box back in the SSL CONFIGURATION page.
7. Click the CONFIGURE button.

   This configures the certificate and saves it to flash memory.

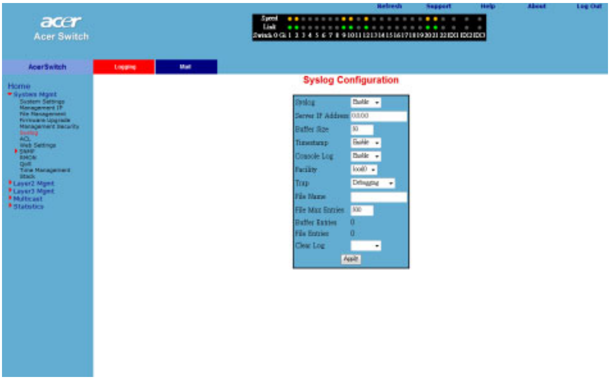
Syslog

The Syslog link provides configuration controls for the following features:

- "Syslog Configuration" on page 297
- "Syslog Mail Configuration" on page 298

Syslog Configuration

Figure 4-185. Syslog Configuration


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
Logging
Mail
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Syslog Configuration
Apply

Syslog
Server IP Address
Buffer Size
Timestamp
Console Log
Facility
Trap Debugging
File Name
File Max Entries
Buffer Entries 0
File Entries 0
Clear Log

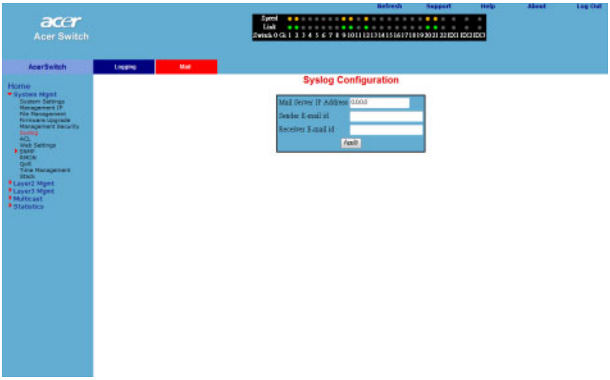
Clicking the LOGGING tab brings up the SYSLOG CONFIGURATION page, which allows you to configure logging parameters. The parameters for this page are shown in the following table.

Parameter	Description
Syslog	This parameter enables or disables the Syslog feature.
Server IP Address	This parameter specifies the Syslog server IP address. Make sure the Server IP is reachable.
Buffer Size	The buffer size is specfied in log entries. Max entries buffered is 200.
Timestamp	This parameter allows you to enable or disable the adding of a timestamp to the log messages.
Console Log	This parameter allows you to enable or disable logging to the console.

Parameter	Description
Facility	This parameter allows you to select supported facilities. The switch supports syslog standard supported facilities LOCAL0, LOCAL1, LOCAL2, LOCAL3, LOCAL4, LOCAL5, LOCAL6, LOCAL7 and USER.
Traps	This parameter helps you to select a particular trap type. The following types of traps are supported ALERTS, CRITICAL, DEBUGGING, EMERGENCIES, ERROR, INFORMATIONAL, NOTIFICATION and WARNINGS.

Syslog Mail Configuration

Figure 4-186. Syslog Mail Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Logging
Mail
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply

Syslog Configuration

Mail Server IP Address 0.0.0.0
Sender E-mail id
Receiver E-mail id

Clicking the MAIL tab brings up the SYSLOG MAIL CONFIGURATION page, which allows you to configure the mail server and mail addresses for the syslog feature. The parameters for this page are shown in the following table.

Parameter	Description
Mail Server IP Address	This parameter specifies the IP address of the mail server. Make sure the mail server is reachable.
Sender Email ID	This parameter specifies the Email ID to be shown as the From address on Syslog Emails.

Parameter	Description
Receiver Email ID	This parameter specifies the receipent Email address for Syslog Emails.

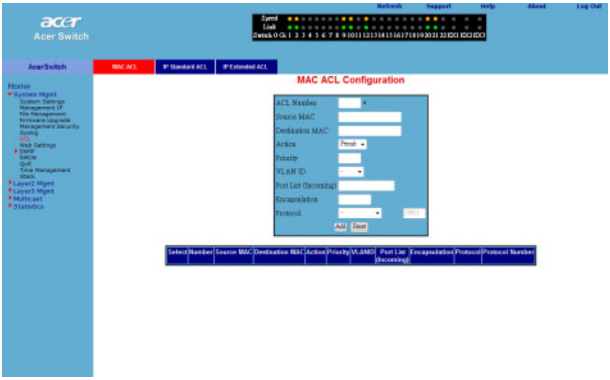
ACL

The ACL link allows you to configure the Access Control List for the switch. You can configure ACL on the following three pages:

- "MAC Based ACL" on page 299
- "IP Standard ACL" on page 300
- "IP Extended ACL" on page 302

MAC Based ACL

Figure 4-187. Mac ACL Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
MAC ACL
IP Standard ACL
IP Extended ACL
MAC ACL Configuration
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
ACL Number
Source MAC
Destination MAC
Action
Permit
Priority
VLAN ID
Port List (Incoming)
Encapsulation
Protocol
Add
Reset
Select
Number
Source MAC
Destination MAC
Action
Priority
VLANID
Port List (Incoming)
Encapsulation
Protocol
Protocol Number

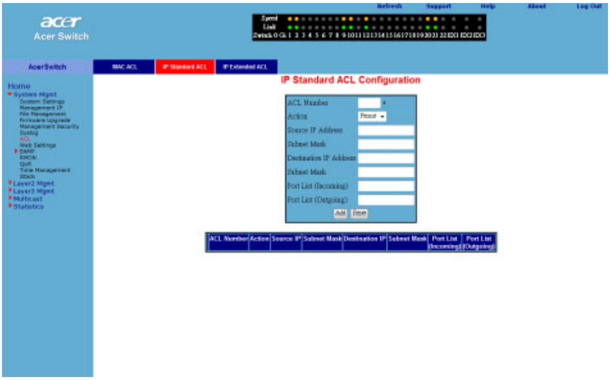
Clicking the MAC ACL tab brings up the MAC ACL CONFIGURATION page, which displays the various parameters to configure the MAC Access List. The parameters for this page are shown in the following table.

Parameter	Description
ACL Number	This parameter specifies a unique ID for the access list.

Parameter	Description
Source and Destination MAC	These fields specify both the Source MAC Address and Destination MAC Address, for which the access list must be applied. Both the Source and Destination MAC Addresses must be configured for the status of the access list to be active.
Action	This parameter specifies the action to be taken for the access list.
Priority	This parameter specifies the priority for the access list.
VLAN ID	This parameter specifies the VLAN ID for which the access list has to be applied.
Port List (Incoming)	This parameter specifies the Port List for which the access list has to be applied.
Encapsulation	This parameter specifies the Encapsulation type of the packet for which the access list has to be applied.
Protocol	This parameter specifies the non-IP protocol type of the packet for which the access list has to be applied.

IP Standard ACL

Figure 4-188. IP Standard ACL Configuration

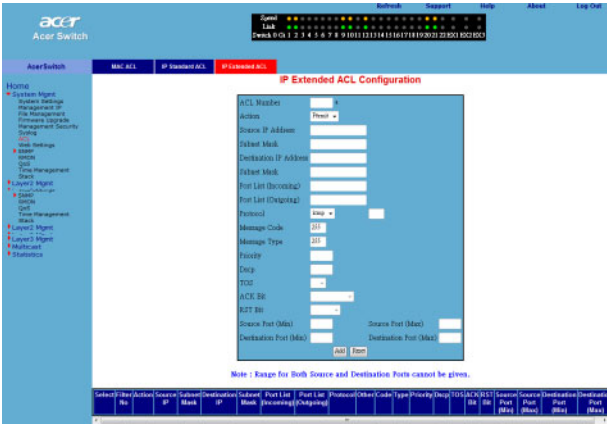

acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
MAC ACL
IP Standard ACL
IP Extended ACL
IP Standard ACL Configuration
ACL Number
Action
Permit
Source IP Address
Subnet Mask
Destination IP Address
Subnet Mask
Port List (Incoming)
Port List (Outgoing)
Add
Reset
ACL Number
Action
Source IP
Subnet Mask
Destination IP
Subnet Mask
Port List (Incoming)
Port List (Outgoing)

Clicking the IP STANDARD ACL tab brings up the IP STANDARD ACL CONFIGURATION page, which displays the various ACL (Access Control List) parameters to configure the Standard IP access lists. The parameters for this page are shown in the following table.

Parameter	Description
ACL Number	This parameter specifies the unique ID for the access list. This value must be in the range from 1 to 1000.
Action	This parameter specifies whether the packets must be allowed or dropped when a match has been found.
Source and Destination IP Address	This parameter specifies the IP Address of the Source and Destination for which the access list must be applied.
Subnet Mask	This parameter specifies the Source and Destination Address Mask corresponding to the IP Address.
Ports List (Incoming)	This parameter specifies the Incoming Port List for which the access list has to be applied.
Ports List (Outgoing)	This parameter specifies the Outgoing Port List for which the access list has to be applied.

IP Extended ACL

Figure 4-189. IP Extended ACL Configuration


acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
MAC ACL
IP Standard ACL
IP Extended ACL
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Add
Reset

IP Extended ACL Configuration

ACL Number	*
Action	Permit
Source IP Address	
Subnet Mask	
Destination IP Address	
Subnet Mask	
Port List (Incoming)	
Port List (Outgoing)	
Protocol	Icmp
Message Code	255
Message Type	255
Priority	
Dscp	
TOS	
ACK Bit	
RST Bit	
Source Port (Min)	Source Port (Max)
Destination Port (Min)	Destination Port (Max)

Note : Range for Both Source and Destination Ports cannot be given.

Select	Filter No	Action	Source IP	Subnet Mask	Destination IP	Subnet Mask	Port List (Incoming)	Port List (Outgoing)	Protocol	Other	Code	Type	Priority	Dscp	TOS	ACK Bit	RST Bit	Source Port (Min)	Source Port (Max)	Destination Port (Min)	Destination Port (Max)

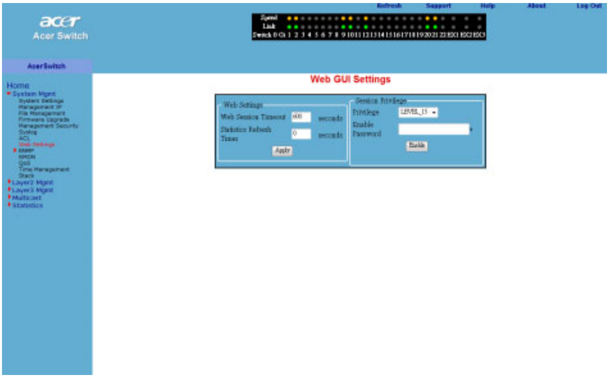
Clicking the IP EXTENDED ACL tab brings up the IP EXTENDED ACL CONFIGURATION page, which displays the various parameters required to configure the Extended IP access lists. The parameters for this page are shown in the following table.

Parameter	Description
ACL Number	This parameter specifies the unique ID for the access list. This value must be in the range from *1001* to *65535*.
Action	This parameter specifies whether the packets must be allowed or dropped when a match has been found.
Source and Destination IP Address	This parameter specifies the IP Address for which the access list must be applied.
Subnet Mask	This parameter specifies the Address Mask corresponding to the IP Address.

Parameter	Description
Ports List (Incoming)	This parameter specifies the Incoming Port List for which the filter has to be applied.
Ports List (Outgoing)	This parameter specifies the Outgoing Port List for which the filter has to be applied.
Protocol	This parameter specifies the type of protocol.
Message Code	This parameter specifies the Message Code to be checked for ICMP Packets.
Message Type	This parameter specifies the Message Type to be checked for ICMP Packets.
Priority	This parameter specifies the Priority for the filter.
TOS	This parameter specifies the Type of Service for the access list.
ACK Bit	This parameter indicates the TCP Ack Bit to be checked against the incoming packet.
RST Bit	This parameter indicates the TCP Reset Bit to be checked against the incoming packet.
Source Port (Min)	These parameters specify the range of TCP/UDP sourceports from which the access list must be applied.
Source Port (Max)	
Destination Port (Min)	These parameters specify the destination ports to which the access list must be applied
Destination Port (Max)	

WEBGUI Settings

Figure 4-190. Web Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
AcerSwitch
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
Web GUI Settings
Web Settings
Session Privilege
Apply
Enable

Web Session Timeout 600 seconds

Statistics Refresh Timer 0 seconds

Privilege LEVEL_15

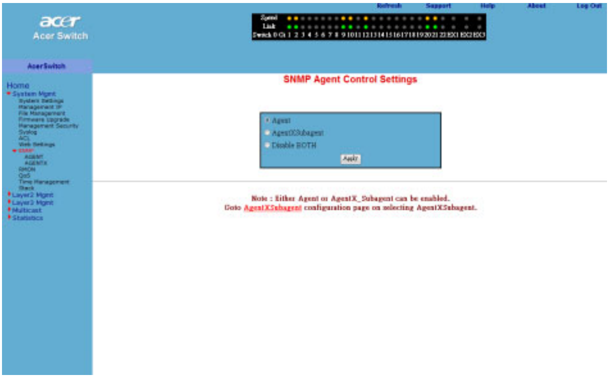
Enable Password

Clicking the WEB SETTINGS link brings up the WEB GUI SETTINGS page, which displays all basic Web GUI settings. The parameters for this page are shown in the following table.

Parameter	Description
Session timeout	This timeout value is used to automatically logout inactive user sessions. The default value is **5-minutes** (600-seconds).
Statistics Refresh Timer	The statistics pages (grouped under "Statistics" node in left side tree) can be set to auto refresh based on this Statistics Refresh Timer. The default value **zero** means no auto refresh by default.
Session Privilege	This displays the current privilege level of the logged in user. You can choose to enter another privilege level using this configuration if you have the Enable Password for the required privilege levels. The Enable Passwords for different levels are configurable in the Management Security web page.

SNMP

Figure 4-191. SNMP Agent Control Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply

SNMP Agent Control Settings

● Agent
○ AgentXSubagent
○ Disable BOTH

Note : Either Agent or AgentX_Subagent can be enabled.
Goto AgentXSubagent configuration page on selecting AgentXSubagent.

Clicking the SNMP link brings up the SNMP AGENT CONTROL SETTINGS page. SMIS supports the **SNMP Agent** or **SNMP AgentX Sub-agent**. The SNMP Agent or AgentX Sub-agent can be enabled or both can be disabled.

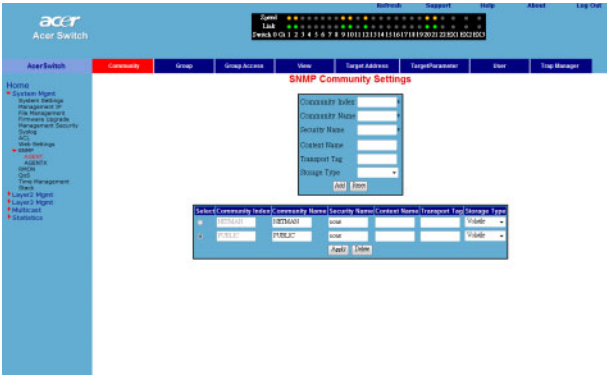
The SNMP Agent provides the following sub-page configurations shown in the table below.

Configuration Page	Description
“SNMP Community Settings” on page 306	This page allows you to configure the SNMP community including the COMMUNITY INDEX, NAME, SECURITY NAME, CONTEXT NAME, TRANSPORT TAG and STORAGE TYPE.
“SNMP Group Settings” on page 308	This page allows you to configure SNMP groups including GROUP NAME, SECURITY NAME, SECURITY MODEL and STORAGE TYPE.
“SNMP Group Access Settings” on page 309	This page allows you to configure access parameters for SNMP groups including GROUP NAME, SECURITY MODEL, SECURITY LEVEL, STORAGE TYPE, and READ, WRITE and NOTIFY VIEW.

Configuration Page	Description
“SNMP View Tree Settings” on page 310	This page allows you to configure an SNMP view tree including VIEW NAME, SUB TREE, MASK, TYPE OF THE VIEW and STORAGE TYPE.
“SNMP Target Address Settings” on page 311	This page allows you to configure SNMP target including TARGET NAME, TARGET IP, TRANSPORT TAG, PARAM and STORAGE TYPE.
“SNMP Target Parameter Settings” on page 313	This setting allows you to configure SNMP target parameters including PARAMETER NAME, MP MODEL, SECURITY MODEL, NAME, LEVEL and STORAGE TYPE.
“SNMP User Settings” on page 314	This setting allows you to configure SNMP security including user name, AUTHENTICATION PROTOCOL, AUTHENTICATION KEY, PRIVACY PROTOCOL, PRIVACY KEY and STORAGE TYPE.
“SNMP Trap Settings” on page 315	This setting allows you to configure SNMP trap notifications including NOTIFY NAME, NOTIFY TAG, NOTIFY TYPE and STORAGE TYPE.

SNMP Community Settings

Figure 4-192. SNMP Community Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Community
Group
Group Access
View
Target Address
TargetParameter
User
Trap Manager
Home
System Mgmt
SNMP
AGENT
AGENTX
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
SNMP Community Settings
Community Index
Community Name
Security Name
Context Name
Transport Tag
Storage Type
Add
Reset
Apply
Delete

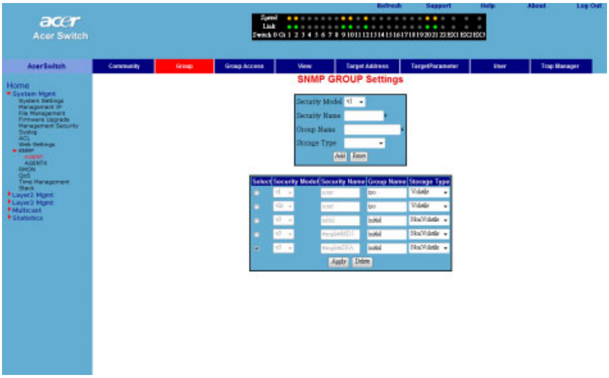
Select	Community Index	Community Name	Security Name	Context Name	Transport Tag	Storage Type
○	NETMAN	NETMAN	none			Volatile
●	PUBLIC	PUBLIC	none			Volatile

Clicking the COMMUNITY tab brings up the SNMP COMMUNITY SETTINGS page, which allows you to add SNMP managers or remove existing managers.. The parameters for this page are shown in the following table.

Parameter	Description
Community index	This parameter sets the COMMUNITY INDEX identifer.
Community name	This parameter sets the COMMUNITY NAME string.
Security Name	This parameter sets the User Name String.
Context Name	This parameter sets the CONTEXT NAME that the management information is accessed from when using the community string, which is specified by the corresponding instance of the SNMP community name.
Transport Tag	This parameter sets the TRANSPORT TAG Identifer.
Storage Type	This parameter sets the *Volatile Storage* or *Non-Volatile Storage* setting.

SNMP Group Settings

Figure 4-193. Group Settings

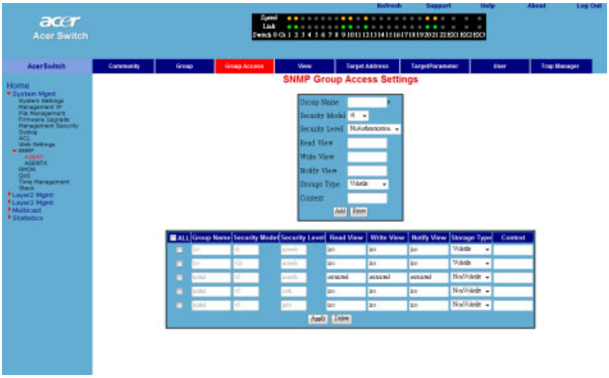

Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
AcerSwitch
Community
Group
Group Access
View
Target Address
TargetParameter
User
Trap Manager
SNMP GROUP Settings
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Security Model
Security Name
Group Name
Storage Type
Add
Reset
Select
Security Model
Security Name
Group Name
Storage Type
Apply
Delete

Clicking the GROUP tab brings up the SNMP GROUP SETTINGS page. This page helps you map a combination of the SECURITY MODEL and the SECURITY NAME into a GROUP NAME, which is used to define an access control policy. In addition, this page displays the STORAGE TYPE of the Group Table. The parameters for this page are shown in the following table.

Parameter	Description
Security Model	This parameter allows you to select from *version 1*, *version 2* or *version 3* for the SECURITY MODEL used.
Security Name	Use this parameter to specify the SECURITY NAME string.
Group Name	Use this parameter to specify the GROUP NAME string.
Storage Type	Use this parameter to specify whether the STORAGE TYPE is *Volatile* or *Non-Volatile*.

SNMP Group Access Settings

Figure 4-194. SNMP Group Access Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
Community
Group
Group Access
View
Target Address
TargetParameter
User
Trap Manager
SNMP Group Access Settings
Group Name
Security Model
Security Level
Read View
Write View
Notify View
Storage Type
Context
Add
Reset
ALL
Group Name
Security Model
Security Level
Read View
Write View
Notify View
Storage Type
Context
Apply
Delete

Clicking the GROUP ACCESS tab brings up the SNMP GROUP ACCESS SETTINGS page, which displays the access rights of groups. Each entry is indexed by a GROUP NAME, a Context Prefix, a SECURITY MODEL and a SECURITY LEVEL. A proper view name (READ, WRITE and MODIFY) must be used for access control checking. It also displays the STORAGE TYPE of the Group Access table. An SNMP Group must be created prior to the Group Access configuration.

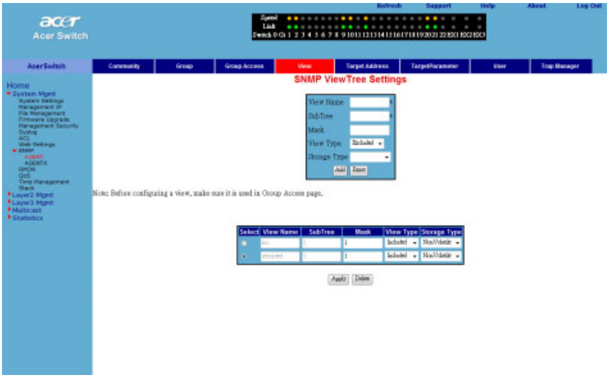
The parameters for this page are shown in the following table.

Parameter	Description
Group Name	This parameter allows you to specify the GROUP NAME string.
Security Model	This parameter allows you to specify whether SNMP *version v1, v2* or *v3* is used. *Version 3* is the most secure model as it allows packet encryption with the private key word.

Parameter	Description
Security Level	With this parameter the no-authentication option disables authentication. The AUTHENTICATION option enables *Message digest (MD5)* or *Secure Hash Algorithm (SHA)* packet authentication. The PRIVATE option selects both AUTHENTICATION and PRIVACY.
Read View	This parameter allows you to specify the READ VIEW identifier.
Write View	This parameter allows you to specify the WRITE VIEW identifier.
Notify View	This parameter allows you to specify the NOTIFY VIEW identifier.
Storage Type	Use this parameter to specify whether the STORAGE TYPE is *Volatile* or *Non-Volatile*.

SNMP View Tree Settings

Figure 4-195. SNMP View Tree Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Community
Group
Group Access
View
Target Address
TargetParameter
User
Trap Manager
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
SNMP ViewTree Settings
View Name
SubTree
Mask
View Type
Included
Storage Type
Add
Reset
Select
View Name
SubTree
Mask
View Type
Storage Type
Apply
Delete

Note: Before configuring a view, make sure it is used in Group Access page.

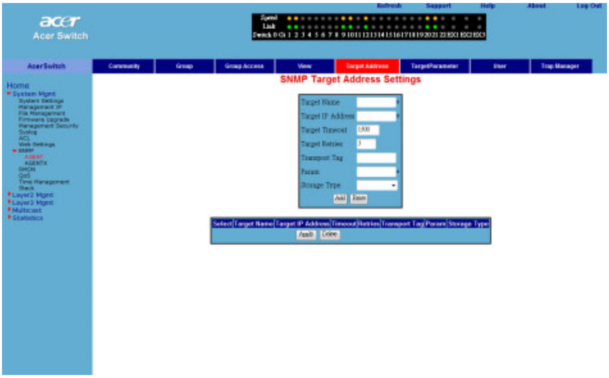
Clicking the VIEW tab brings up the SNMP VIEW TREE SETTINGS page, which allows configuration of view trees. A SUBTREE when combined with the corresponding instance of a MASK defines a family of view subtrees. The VIEW NAME is the name for a family of view subtrees. This page also displays the STORAGE TYPE of the VIEWTREE table. SNMP Group and SNMP Access settings have to be created prior to the Group View configuration.

The parameters for this page are shown in the following table.

Parameter	Description
View Name	This parameter specifies a VIEW NAME string.
SubTree	This parameter specifies a tree OID.
Mask	This parameter specifies an OID mask.
View Type	This parameter specifies whether a VIEW TYPE is *Included* or *Excluded*.
Storage Type	Use this parameter to specify whether the STORAGE TYPE is *volatile* or *non-volatile*.

SNMP Target Address Settings

Figure 4-196. SNMP Target Address Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Community
Group
Group Access
View
Target Address
TargetParameter
User
Trap Manager
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Add
Reset
Apply
Delete

SNMP Target Address Settings

Target Name
Target IP Address
Target Timeout 1500
Target Retries 3
Transport Tag
Param
Storage Type

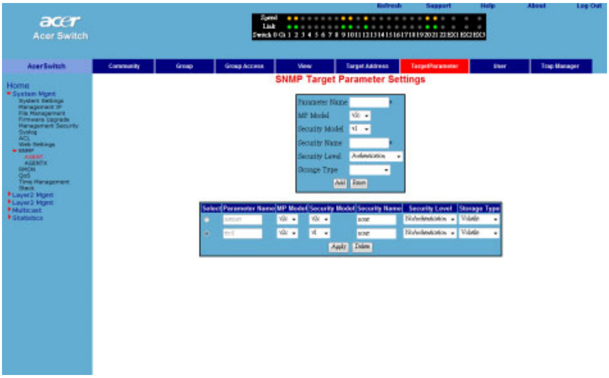
Select	Target Name	Target IP Address	Timeout	Retries	Transport Tag	Param	Storage Type

Clicking the TARGET ADDRESS tab brings up the SNMP TARGET ADDRESS SETTINGS page, which configures SNMP target address parameters. The parameters for this page are shown in the following table.

Parameter	Description
Target Name	This parameter specifies a TARGET NAME as a unique identifier.
Target IP Address	The TARGET IP ADDRESS specifies a target address to be used in the generation of SNMP operations.
Target Timeout	TARGET TIMEOUT specifies the maximum round trip for communicating with the TARGET IP ADDRESS.
Target Retries	TARGET RETRIES specifies the number of attempts to be made when no response is received
Transport Tag	The TRANSPORT TAG value is used to select a target address for a particular operation.
Param	PARAM contains SNMP parameters to be used when generating messages to be sent to a transport address.
Storage Type	Use this parameter to specify whether the STORAGE TYPE is *volatile* or *non-volatile*.

SNMP Target Parameter Settings

Figure 4-197. SNMP Target Parameter Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
Community
Group
Group Access
View
Target Address
TargetParameter
User
Trap Manager
SNMP Target Parameter Settings
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Parameter Name
MP Model
Security Model
Security Name
Security Level
Storage Type
Add
Reset
Select
Parameter Name
MP Model
Security Model
Security Name
Security Level
Storage Type
Apply
Delete

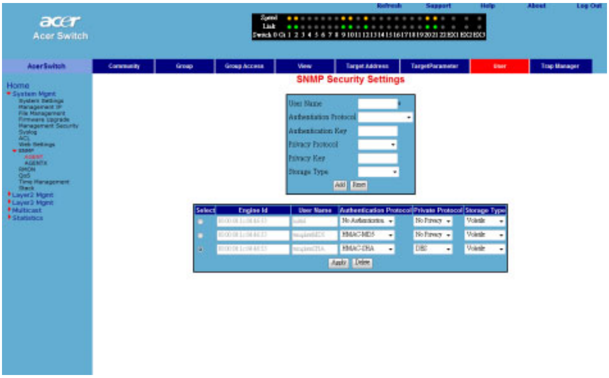
Clicking the TARGET PARAMETER tab brings up the SNMP TARGET PARAMETER SETTINGS page, which configures SNMP Target Address parameters. The parameters for this page are shown in the following table.

Parameter	Description
Parameter Name	The target parameter is an unique name that specifies SNMP target information to be used in the generation of SNMP messages.
MP Model	The Message Processing (MP) Model is used when generating SNMP messages using this entry.
Security Model	The SECURITY MODEL is used when generating SNMP messages using this entry.
Security Name	The SECURITY NAME identifies the current PARAMETER NAME, on whose behalf SNMP messages will be generated.

Parameter	Description
Security Level	SECURITY LEVEL specifies the level of security used when generating SNMP messages.
Storage Type	STORAGE TYPE can be configured as *Volatile* or *Non-Volatil*E.

SNMP User Settings

Figure 4-198. SNMP Security Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Community
Group
Group Access
View
Target Address
TargetParameter
User
Trap Manager
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
SNMP Security Settings
User Name
Authentication Protocol
Authentication Key
Privacy Protocol
Privacy Key
Storage Type
Add
Reset
Apply
Delete

Select	Engine Id	User Name	Authentication Protocol	Private Protocol	Storage Type
○	[illegible]	[illegible]	No Authentication	No Privacy	Volatile
○	[illegible]	[illegible]	HMAC-MD5	No Privacy	Volatile
●	[illegible]	[illegible]	HMAC-SHA	DES	Volatile

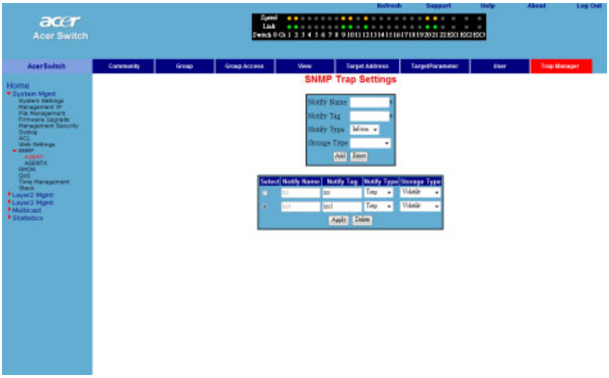
Clicking the USER tab brings up the SNMP SECURITY SETTINGS page, which configures users configured in the SNMP for the User-based Security Model. The parameters for this page are shown in the following table.

Parameter	Description
User Name	USER NAME is the (User-based Security) model dependent security ID.
Authentication Protocol	The AUTHENTICATION PROTOCOL is used for authentication.

Parameter	Description
Authentication Key	The AUTHENTICATION KEY is the secret authentication key used for messages sent on behalf of this user to/from the SNMP.
Privacy Protocol	PRIVACY PROTOCOL is an indication of whether or not messages sent on behalf of this user to/from the SNMP are protected from disclosure, and if so, the type of privacy protocol that is used.
Privacy Key	PRIVACY KEY is an indication of whether or not messages sent on behalf of this user to/from the SNMP are protected from disclosure.
Storage Type	STORAGE TYPE can be configured as *Volatile* or *Non-Volatile*.

SNMP Trap Settings

Figure 4-199. SNMP Trap Settings

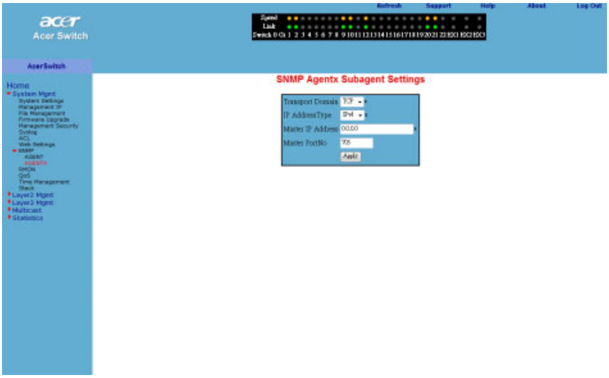

Refresh
Support
Help
About
Log Out
Acer Switch
AcerSwitch
Community
Group
Group Access
View
Target Address
TargetParameter
User
Trap Manager
SNMP Trap Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Notify Name
Notify Tag
Notify Type
Storage Type
Add
Reset
Select
Apply
Delete

Clicking the TRAP MANAGER tab brings up the SNMP TRAP SETTINGS page, which configures the set of management targets that must receive notifications. The parameters for this page are shown in the following table.

Parameter	Description
Notify Name	NOTIFY NAME is a unique identifier associated with the entry.
Notify Tag	NOTIFY TAG contains a single tag value, which is used to select entries in the Target Address table. Any entry in the Target Address table that contains a tag value equal to the value of an instance of this Trap Manager, is selected.
Notify Type	The type of notification of the SNMP Trap Settings can be configured as *Trap* or *Inform*.
Storage Type	STORAGE TYPE can be configured as *Volatile* or *Non-Volatile*.

SNMP AgentX

Figure 4-200. SNMP AgentX Subagent Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply

SNMP Agentx Subagent Settings

Transport Domain: TCP
IP AddressType: IPv4
Master IP Address: 0.0.0.0
Master PortNo: 705

Clicking the AGENTX link brings up the SNMP AGENTX SUBAGENT SETTINGS page, which allows you to configure SNMP Agentx sub-agent parameters. The parameters for this page are shown in the following table.

Parameter	Description
Transport Domain	This parameter allows you to specify the TCP.
IP Address Type	This parameter specifies *IPv4* or *IPv6* for the IP ADDRESS TYPE.
Master IP Address	This parameter specifies the Master Agent IP address.
Master Port No	This parameter specifies the Master Port number.

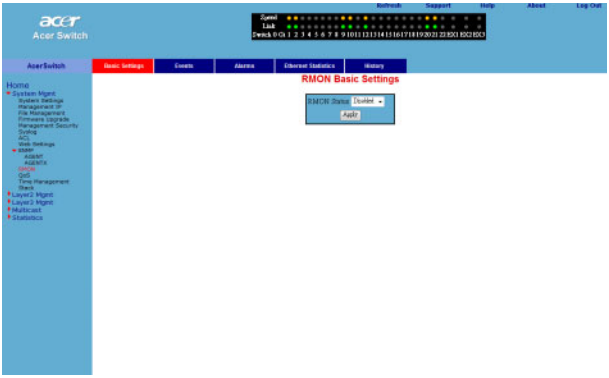
RMON

The following pages can be used to set RMON (Remote Monitoring) features and settings:

- "RMON Basic Settings" on page 317
- "Event Configuration" on page 318
- "RMON Alarm Configuration" on page 319
- "Ethernet Statistics Configuration" on page 321
- "History Control Configuration" on page 322

RMON Basic Settings

Figure 4-201. RMON Basic Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Events
Alarms
Ethernet Statistics
History
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply

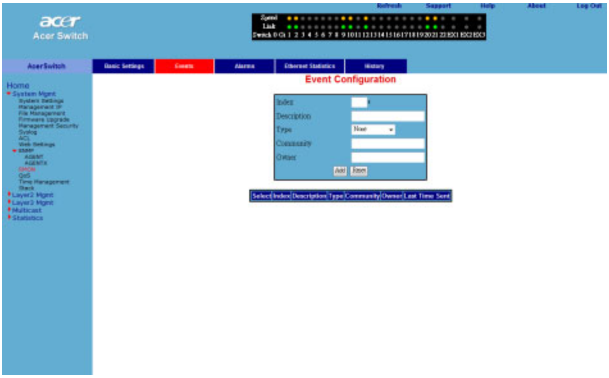
RMON Basic Settings

RMON Status: Disabled

Clicking the BASIC SETTINGS tab brings up the RMON BASIC SETTINGS page, which enables/disables the RMON feature using the RMON Status parameter.

Event Configuration

Figure 4-202. Event Configurations


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
Basic Settings
Events
Alarms
Ethernet Statistics
History
Event Configuration
Home
System Mgmt
Index
Description
Type
None
Community
Owner
Add
Reset
Select
Index
Description
Type
Community
Owner
Last Time Sent
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

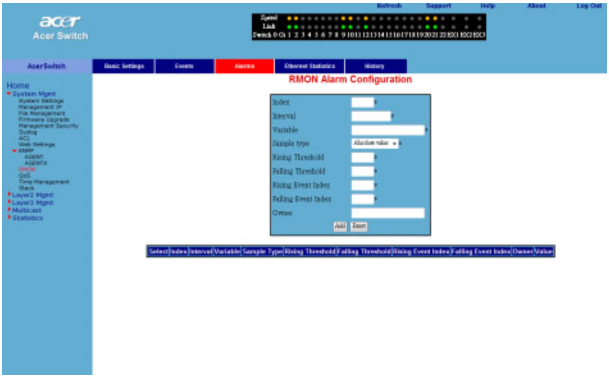
Clicking the EVENTS tab brings up the EVENT CONFIGURATIONS page, which configures RMON events. The parameters for this page are shown in the following table.

Parameter	Description
Index	This parameter specifies the index to the Events table.
Description	This parameter specifies a brief description of the event.
Type	This parameter specifies the event configured. This can be a *Log*, an *SNMP Trap*, *Both*, or *None*. For the event type to display, *TRAP and Log* and *TRAP Community* must be configured.

Parameter	Description
Community	This parameter specifies the SNMP community string used for this trap. This is relevant when an SNMP trap is requested for an event. For event type to display, *TRAP and Log* and *TRAP Community* must be configured. Also make sure the configured community is active before adding an event on that community.
Owner	This parameter indicates the owner of this event.
Last Time Sent	This parameter denotes the time this event entry last generated an event.

RMON Alarm Configuration

Figure 4-203. Alarm Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Events
Alarms
Ethernet Statistics
History
RMON Alarm Configuration
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Index
Interval
Variable
Sample type
Absolute value
Rising Threshold
Falling Threshold
Rising Event Index
Falling Event Index
Owner
Add
Reset
Select
Index
Interval
Variable
Sample Type
Rising Threshold
Falling Threshold
Rising Event Index
Falling Event Index
Owner
Value

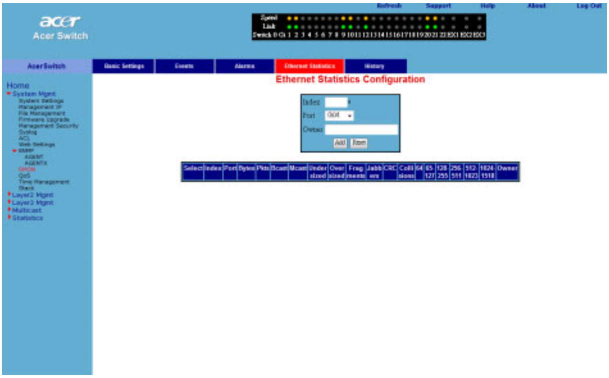
Clicking the ALARM tab brings up the RMON ALARM CONFIGURATION page, which configures RMON Alarm paramters. The parameters for this page are shown in the following table.

Parameter	Description
Index	This parameter specifies the table index.

Parameter	Description
Interval	This parameter specifies the time interval for which the alarm monitors the variable.
Variable	This parameter specifies the MIB object on which the alarm is set.
Sample Type	You can set this parameter to an *Absolute Value* or as just an *Incremental Value* of the timer.
Rising Threshold	If the startup alarm is set as *Rising Alarm* and this threshold is reached, an alarm is raised.
Falling Threshold	If the startup alarm is set as *Falling Alarm* and this threshold is reached, an alarm is raised.
Rising Event Index	Indicates the index of the event to be raised when the RISING THRESHOLD is reached.
Falling Event Index	Indicates the index of the event to be raised when the FALLING THRESHOLD is reached.
Owner	Specifies the owner of the alarm.

Ethernet Statistics Configuration

Figure 4-204. Ethernet Statistics Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Events
Alarms
Ethernet Statistics
History
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Ethernet Statistics Configuration
Index
Port
Owner
Add
Reset
Select
Index
Port
Bytes
Pkts
Bcast
Mcast
Undersized
Oversized
Fragments
Jabbers
CRC
Collisions
64
65-127
128-255
256-511
512-1023
1024-1518
Owner

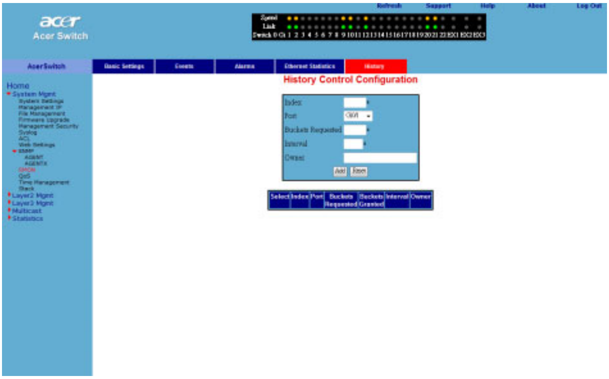
Clicking the ETHERNET STATISTICS tab brings up the ETHERNET STATISTICS CONFIGURATION page, which configures RMON Ethernet statistics parameters. The parameters for this page are shown in the following table.

Parameter	Description
Index	This parameter specifies the index to the table.
Port	This parameter specifies the Ethernet Port.
Octets	This parameter specifies the total number of octets received from the network.
Packets	This parameter specifies the total number of packets received from the network.
Broadcast Packets	This parameter specifies the total number of broadcast packets received from the network.
Multicast Packets	This parameter specifies the total number of multicast packets received from the network.

Parameter	Description
Owner	This parameter specifies the owner string.

History Control Configuration

Figure 4-205. History Control Configuration


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Events
Alarms
Ethernet Statistics
History
History Control Configuration
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Index
Port
Buckets Requested
Interval
Owner
Add
Reset
Select
Index
Port
Buckets Requested
Buckets Granted
Interval
Owner

Clicking the HISTORY tab brings up the HISTORY CONTROL CONFIGURATION page, which configures RMON history parameters. The parameters for this page are shown in the following table.

Parameter	Description
Index	This parameter specifies the index to the table.
Data Source	This parameter specifies the SNMP object ID of the variable for which the history is being collected.
Buckets Requested	Indicates the number of buckets to be configured for collecting the RMON statistics.
Interval	This parameter specifies the time interval between two successive polls to collect the statistics.

Parameter	Description
Owner	Denotes the owner of the RMON group of statistics.
Buckets Granted	Denotes the number of buckets granted for collecting the RMON statistics.
Status	This parameter specifies the status of the History Control entry as either *Valid* or *Invalid*.

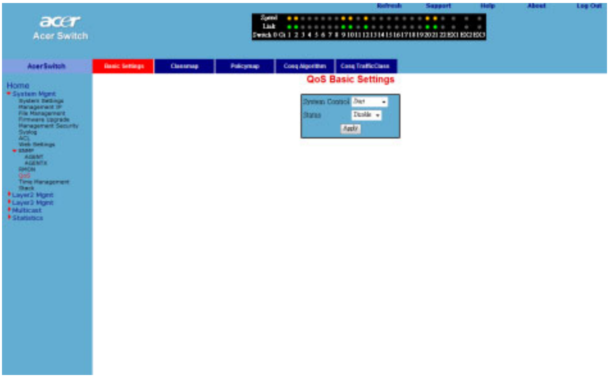
QoS

The QoS link of the System page opens the QoS Basic Settings page. This page allows you to configure QoS through following pages:

- "QoS Basic Settings" on page 323
- "QoS Classmap Settings" on page 324
- "QoS Policymap Settings" on page 325
- "CoSQ Scheduling Algorithm" on page 326
- "CoSQ Weight and Bandwidth Configuration" on page 327

QoS Basic Settings

Figure 4-206. QoS Basic Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Classmap
Policymap
Cosq Algorithm
Cosq TrafficClass
QoS Basic Settings
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply

System Control: Start

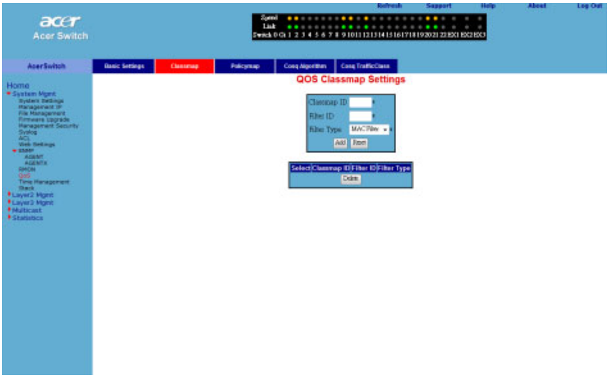
Status: Disable

Clicking the Basic Settings tab brings up the QoS Basic Settings page, which allows you to configure QoS basic settings parameters. The parameters for this page are shown in the following table.

Parameter	Description
System Control	With this parameter SYSTEM CONTROL can *Start* or *Shutdown* QoS.
Status	This parameter allows enabling/disabling of the QoS status.

QoS Classmap Settings

Figure 4-207. QoS Classmap Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Classmap
Policymap
Cosq Algorithm
Cosq TrafficClass
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
QOS Classmap Settings
Add
Reset
Delete

Classmap ID
Filter ID
Filter Type: MACFilter

Select	Classmap ID	Filter ID	Filter Type

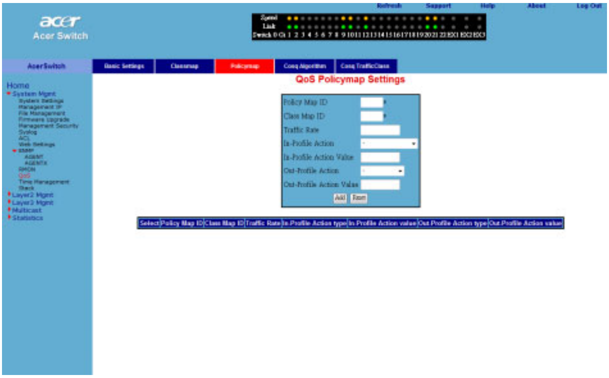
Clicking the CLASSMAP tab brings up the QOS CLASSMAP SETTINGS page, which is used to classify the stream of traffic. The parameters for this page are shown in the following table.

Parameter	Description
Classmap ID	This parameter specifies a unique ID for the Classmap. It must be in the range from *1* to *65535*.
Filter ID	This parameter specifies the unique filter ID associated with this Classmap.

Parameter	Description
Filter Type	This parameter specifies the filter type associated with the Classmap. It can be set as either *MAC filter (1)* or *IP filter (2)*.

QoS Policymap Settings

Figure 4-208. QoS Policymap Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
AcerSwitch
Basic Settings
Classmap
Policymap
Cosq Algorithm
Cosq TrafficClass
QoS Policymap Settings
Policy Map ID
Class Map ID
Traffic Rate
In-Profile Action
In-Profile Action Value
Out-Profile Action
Out-Profile Action Value
Add
Reset
Select
Policy Map ID
Class Map ID
Traffic Rate
In Profile Action type
In Profile Action value
Out Profile Action type
Out Profile Action value

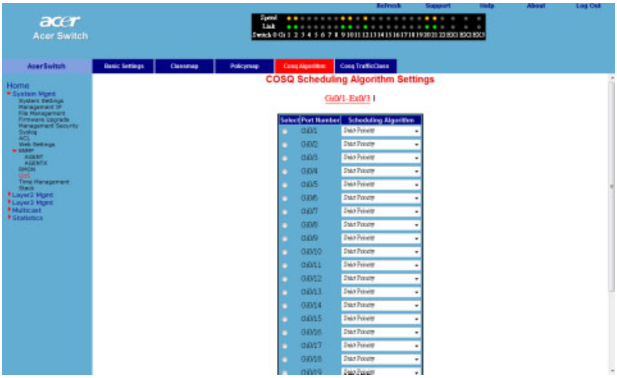
Clicking the POLICYMAP tab brings up the QOS POLICYMAP SETTINGS page, which is used to specify action for a specified classmap. The parameters for this page are shown in the following table.

Parameter	Description
Policy Map ID	This parameter specifies the unique ID for Policymap. The value ranges between *1* and *65535.*
Class Map ID	This parameter specifies the CLASS MAP ID to associate with Policymap.
Traffic Rate	This parameter specifies the TRAFFIC RATE of data that has to be applied.

Parameter	Description
In-Profile Action	This parameter specifies the action to be applied on matched data, and can be specified as either *Policy DSCP* or *Policy Precedence*.
Out-Profile Action	This parameter specifies the action to be applied on out-of-profile data, and can be specified as either *Policy DSCP* or *Drop*.
In-Profile Action Value	The IN-PROFILE ACTION VALUE can be specified from *0* to *7* for DSCP, or from *0* to *63* for IP Precedence.
Out-Profile Action Value	The OUT-PROFILE ACTION VALUE can be specified as *Drop* or from *0* to *63* for DSCP.

CoSQ Scheduling Algorithm

Figure 4-209. CoSQ Scheduling Algorithm Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Classmap
Policymap
Cosq Algorithm
Cosq TrafficClass
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

COSQ Scheduling Algorithm Settings

Gi0/1-Ex0/3 |

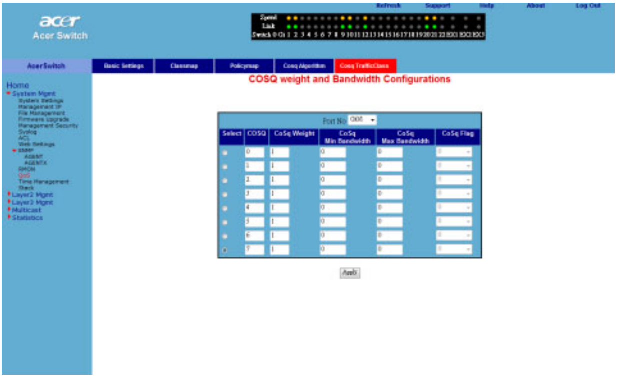
Select	Port Number	Scheduling Algorithm
○	Gi0/1	Strict Priority
○	Gi0/2	Strict Priority
○	Gi0/3	Strict Priority
○	Gi0/4	Strict Priority
○	Gi0/5	Strict Priority
○	Gi0/6	Strict Priority
○	Gi0/7	Strict Priority
○	Gi0/8	Strict Priority
○	Gi0/9	Strict Priority
○	Gi0/10	Strict Priority
○	Gi0/11	Strict Priority
○	Gi0/12	Strict Priority
○	Gi0/13	Strict Priority
○	Gi0/14	Strict Priority
○	Gi0/15	Strict Priority
○	Gi0/16	Strict Priority
○	Gi0/17	Strict Priority
○	Gi0/18	Strict Priority
○	Gi0/19	Strict Priority

Clicking the COSQ ALGORITHM tab brings up the COSQ SCHEDULING ALGORITHM SETTINGS page, which allows you to choose the CoSQ (Class of Service Queue) scheduling algorithm for every port. The parameters for this page are shown in the following table.

Parameter	Description
Port Number	This list of ports allows you to select from the port index for your selected algorithm.
Scheduling Algorithm	The SCHEDULING ALGORITHM can be selected as one of the following: • Strict Priority • Round Robin • Weighted Round Robin • Weighted Fair Queuein • Strict Round Robin • Strict Weighted Round Robin • Strict Weighted Fair Queueing • Deficit Round Robin

CoSQ Weight and Bandwidth Configuration

Figure 4-210. CoSQ Weight and Bandwidth Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Classmap
Policymap
Cosq Algorithm
Cosq TrafficClass
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply

COSQ weight and Bandwidth Configurations

Port No Gi0/1

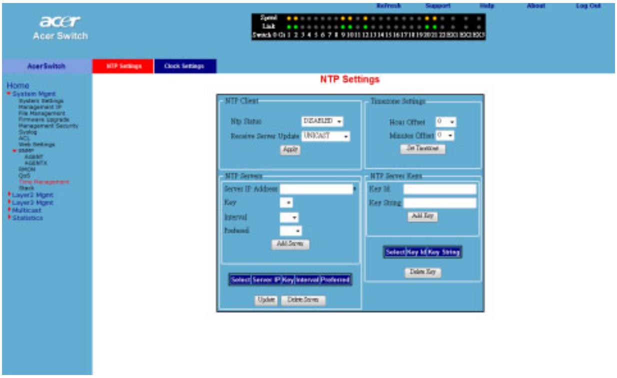
Select	COSQ	CoSq Weight	CoSq Min Bandwidth	CoSq Max Bandwidth	CoSq Flag
○	0	1	0	0	[illegible]
○	1	1	0	0	[illegible]
○	2	1	0	0	[illegible]
○	3	1	0	0	[illegible]
○	4	1	0	0	[illegible]
○	5	1	0	0	[illegible]
○	6	1	0	0	[illegible]
●	7	1	0	0	[illegible]

Clicking the CoSQ TRAFFIC CLASS tab brings up the CoSQ WEIGHT AND BANDWIDTH CONFIGURATIONS page, which allows you to configure the weight and bandwidth for CoS Queues. The parameters for this page are shown in the following table.

Parameter	Description
CoSQ Queue	This parameter allows you to select between *0* to *7* for your CoSQ QUEUE value.
CoSQ Weight	This parameter allows you to select between *0* to *15* for your CoSQ WEIGHT value.
CoSQ Min Bandwidth	This parameter configures minimum bandwidth between *1* and *262143*.
CoSQ Max Bandwidth	This parameter configures maximum bandwidth between *1* and *262143*.
CoSQ Flag	Use this parameter to set a flag for this queue.

NTP Settings

Figure 4-211. NTP Settings



Ntp Status: DISABLED
Receive Server Update: UNICAST
Hour Offset: 0
Minutes Offset: 0

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
NTP Settings
Clock Settings
NTP Settings
Home
System Mgmt
System Settings
Management IP
File Management
Firmware Upgrade
Management Security
Syslog
ACL
Web Settings
SNMP
AGENT
AGENTX
RMON
QoS
Time Management
Stack
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
NTP Client
Apply
Timezone Settings
Set Timezone
NTP Servers
Server IP Address
Key
Interval
Preferred
Add Server
Select | Server IP | Key | Interval | Preferred
Update
Delete Server
NTP Server Keys
Key Id
Key String
Add Key
Select | Key Id | Key String
Delete Key

Clicking the NTP link brings up the NTP SETTINGS page, which configures the Network Time Protocol (NTP). The parameters for this page are shown in the following table.

Parameter	Description
NTP Client Settings	

Parameter	Description
NTP Status	This field enables or disables NTP in the switch. Configure the NTP SERVERS section to enable NTP.
Receive Server Update	The value for this parameter could be *Broadcast* or *Unicast*. To process the broadcast NTP updates from the server, choose the *Broadcast* option.
Timezone Settings	
Hour Offset	This parameter allows you to enter an hour offset from GMT for local time.
Minutes Offset	This parameter allows you to enter a minutes offset (after hour offset) from GMT for local time.
NTP Servers	
Server IP Address	Use this parameter to enter the NTP server IP address.
Key	Choose the key from the configured list. These keys are configurable in this page in the NTP SERVER KEYS section's fields.
Interval	This parameter allows you to choose the interval from the given list.
Preferred	This parameter allows you to choose the preferred server. Choose *Yes* if this server needs to be preferred over other configured NTP servers. You can add multiple NTP servers.
NTP Servers Keys	
Key ID	Use this parameter to select a number to identify the configured key strings.
Key String	Use this paramter to specify any string to be used as a key to handshake with NTP servers.

Stack

The Acer switch supports stacking of Acer switch units. Switch stacking is created by connecting switches in a daisy chain. One of the stacked switches is selected as a Master based on its configurations. The Master switch provides management support for the whole stack. Other switches in the stack are referred to as slave switches.

Note: Make sure all stacked switches are running the same version of firmware.

The Master switch manages the control plane traffic for all stacked switches. When the current master switch fails, the backup master is then selected as the current master. The Master selection algorithm is based on a priority configuration. If two switches have the same priority, the switch with the lowest MAC address is selected as the Master switch.

Enabling Stacking

By default, Acer switches act as stand-alone switches. This stand-alone default facilitates using 10G Ethernet ports as Extreme Ethernet ports for uplinks.

When stacking is enabled the stacking ports are dedicated for stacking purposes. Stacking can be enabled using the command `stack` with the switch identifier and priority. The detailed command syntax is explained below.

Note: When stacking is enabled, the switch needs to be rebooted to make it effective.

Note: When a switch is acting as a stand-alone switch with stacking disabled, all physical interfaces are numbered as `0/1` to `0/n`.

When the switch is in stacking mode, the interfaces are numbered as <switch id>/1 to <switch id> / n.

In non-stacking mode, the switch ID is considered to be 0.

The interface numbers change between stacking and non-stacking cases due to the switch ID. So configurations saved for stacking are not valid for non-stacking cases and vice versa.

Note: If you choose stacking using the `stack` command from a non-stacking case, and the configurations are already saved for restoring the switch, it will rename the configuration file by adding a suffix `_nonstack` and will not restore this file when the switch reboots with stacking enabled.

Similarly, if you choose non-stacking using the `no stack` command from the stacking case, and the configurations are already saved for restoring the switch, it will rename the configuration file by adding a suffix `_stack` and will not restore this file when the switch reboots with stacking disabled.

Adding Stacking Members

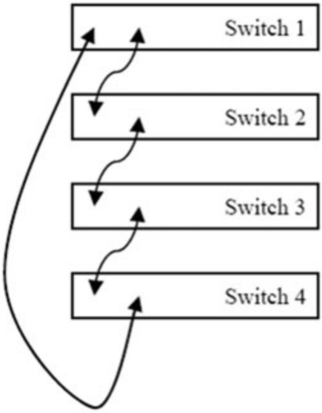
Connect the stacked switches using stacking cables. For better redundancy, connect the switches daisy-chained. This chain connectivity helps to maintain stacking in case a single link or switch fails.

Before connecting switches in stacking, make sure stacking is enabled in all switches and that the switch identifier and priorities are all configured properly.

There is no other specifical configuration required to add stacked switches. If two stacking-enabled switches connect through stacking cables, they form a stack.

Note: Do not use the same switch ID for multiple switches on the stack.

Figure 4-212. Stacking Swtiches



Note: In a stack only one switch can be configured as master. Otherwise the slave switches will not allow you to configure anything except *stacking disabled*. To login to slave switches, use a login name as "**stackuser**" and password as "**stack123**".

Removing a stacked switch

To remove a switch from stacking follow the below recommended procedure.

1. Disconnect stacking cables.
2. Reboot the removed switch as a standalone switch.
3. *Disable* stacking.
4. Reboot the switch again to operate as regular stand-alone switch.

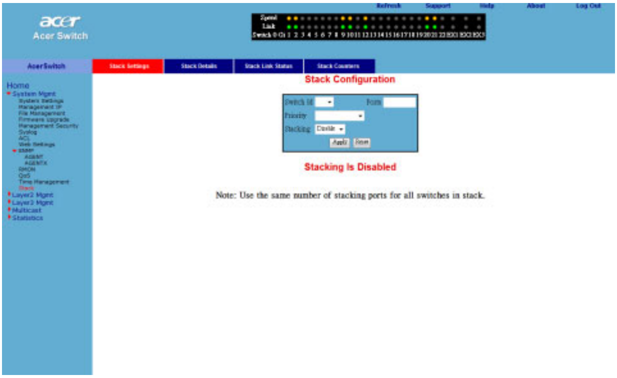
Note: When a switch is moved fromstacking to stand-alone mode, the saved stacking configurations can not be loaded in stand-alone mode. When stacking is disabled, the switch software renames the existing configuration file to avoid automatic restoration of stacking configurations on a stand-alone switch.

The following pages are available for configuring Stack settings;

- “Stack Configuration” on page 334
- “Stack Details” on page 335
- “Stack Counters” on page 337

Stack Configuration

Figure 4-213. Stack Configuration


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 XXG1 XXG2 XXG3
AcerSwitch
Stack Settings
Stack Details
Stack Link Status
Stack Counters
Home
Switch Id
Ports
Priority
Apply
Reset

Stack Configuration

Stacking: Disable

Stacking Is Disabled

Note: Use the same number of stacking ports for all switches in stack.

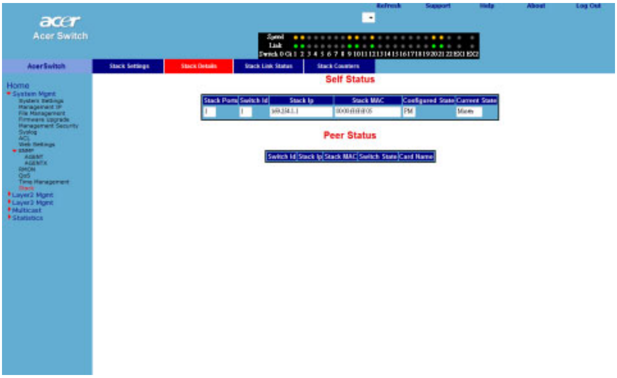
Clicking the STACK SETTINGS tab brings up the STACK CONFIGURATION page, which configures the stacking feature. The parameters for this page are shown in the following table.

Parameter	Description
Switch ID	This parameter defines a switch identifier number for this switch. This identifier should be unique in the stack, since the number is used in referring all physical interfaces available in this switch. So for example, if this parameter is choosen as *2*, the physical interfaces will be referred as *Gi2/1*, *Gi2/1* and so on. For non-stacking, stand-alone cases this switch ID is considered as *zero*.
Ports	This parameter represents the number of stacking ports. You can choose the number based upon your preferred stacking configuration and available CX4 ports. It is recommended that you use two CX4 ports as stacking ports to get redundancy.
Priority	This parameter chooses the priority for this switch in the Stacking Master selection. It could be configured as *Preferred Master*, *Backup Master* or *Preferred Slave*.

Parameter	Description
Stacking	This parameter enables or disables stacking. **NOTE:** Any change in stacking status requires a reboot of the switch.

Stack Details

Figure 4-214. Stack Details



Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
Stack Settings
Stack Details
Stack Link Status
Stack Counters
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

Self Status

Stack Ports	Switch Id	Stack Ip	Stack MAC	Configured State	Current State
1	1	[illegible]	[illegible]	PM	Master

Peer Status

Switch Id	Stack Ip	Stack MAC	Switch State	Card Name

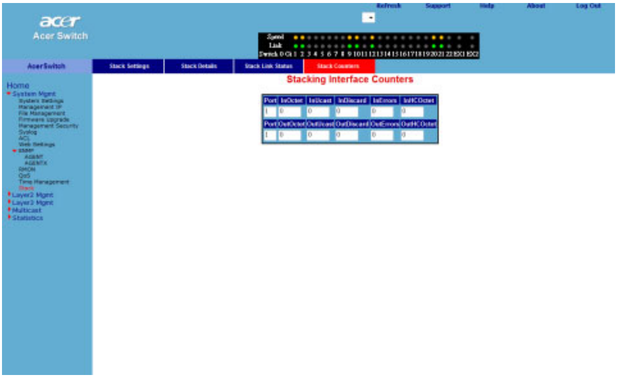
Clicking the STACK DETAILS tab brings up the STACK DETAILS page, which displays stacking details. The parameters for this page are shown in the following table.

Parameter	Description
Self Status	
Stack Ports	This is the number of stacking ports configured in this switch.
Switch ID	This parameter is used to specify the switch identifier of this switch.
Stack IP	This parameter is used to specify the IP address of this switch. This IP address is used to communicate between stack member switches.

Parameter	Description
Stack MAC	This parameter is used to specify the MAC address of this switch. This MAC address is used to communicate between stack member switches.
Configured State	This parameter is used to specify the priority of this switch.
Current State	This parameter is used to specify the current status of this switch as *Master* or *Slave*.
Peer Status – The following parameters display information about all connected stack Slave switches.	
Switch ID	This parameter is used to specify the switch identifier of the Slave switch.
Stack IP	This parameter is used to specify the IP address of the Slave switch. This IP address is used to communicate between stack member switches.
Stack MAC	This parameter is used to specify the MAC address of the Slave switch. This MAC address is used to communicate between stack member switches.
Switch State	This parameter is used to specify the current status of the Slave switch.
Card Name	This parameter is used to specify the type of Slave switch.

Stack Counters

Figure 4-215. Stack Counters


Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
Stack Settings
Stack Details
Stack Link Status
Stack Counters
Home

Stacking Interface Counters

Port	InOctet	InUcast	InDiscard	InErrors	InHCOctet
1	0	0	0	0	0

Port	OutOctet	OutUcast	OutDiscard	OutErrors	OutHCOctet
1	0	0	0	0	0

Clicking the STACK COUNTERS tab brings up the STACK COUNTERS DETAILS page, which displays statistics for stacking ports. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter displays the stacking port identifier.
Received Statistics	
InOctet	This parameter displays the number of bytes received.
InUcast	This parameter displays the number of unicast packets received.
InDiscard	This parameter displays the number of received packets which were discarded.
InErrors	This parameter displays the number of packets received with errors.

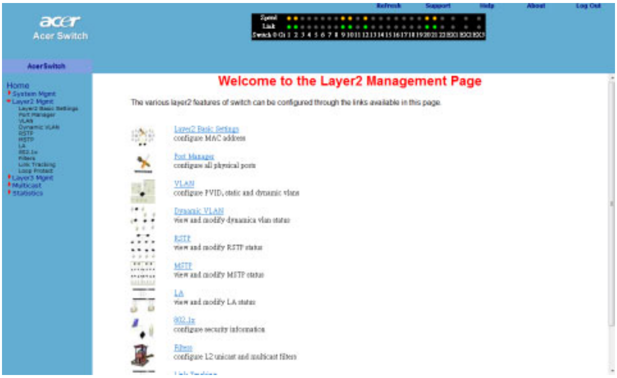
Parameter	Description
InHCOctet	This parameter displays the number of bytes received with HC.
Transmit Statistics	
OutOctet	This parameter displays the number of bytes transmitted.
OutUcast	This parameter displays the number of unicast packets transmitted.
OutDiscard	This parameter displays the number of packets discarded in transmission.
OutErrors	This parameter displays the number of packets transmitted got errors.
OutHCOctet	This parameter displays the number of bytes transmitted with HC.

Note: HC refers to the *High Capacity* value of the counter used. The regular counter is 32-bit. The HC counter is 64-bit.

Layer 2 Management

The LAYER2 MANAGEMENT page has links to all pages with Layer2 controls.

Figure 4-216. Layer2 Management


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

Welcome to the Layer2 Management Page

The various layer2 features of switch can be configured through the links available in this page.

Layer2 Basic Settings
configure MAC address

Port Manager
configure all physical ports

VLAN
configure PVID, static and dynamic vlans

Dynamic VLAN
view and modify dynamica vlan status

RSTP
view and modify RSTP status

MSTP
view and modify MSTP status

LA
view and modify LA status

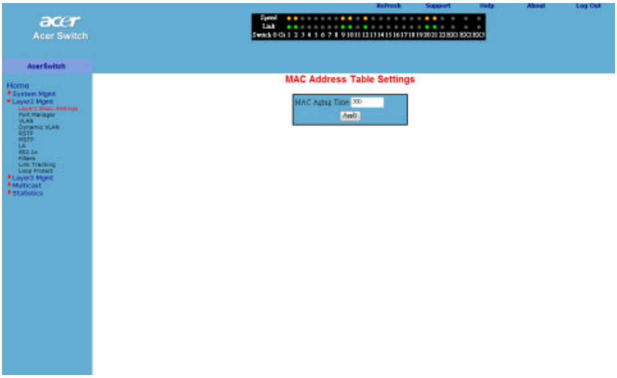
802.1x
configure security information

Filters
configure L2 unicast and multicast filters

Link Tracking

Layer 2 Basic Settings

Figure 4-217. MAC Address Table Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Apply

MAC Address Table Settings

MAC Aging Time 300

Clicking the LAYER2 BASIC STTINGS link brings up the MAC ADDRESS TABLE SETTINGS page, which gives you the option to change MAC aging time. MAC address confirmation can be done with this time interval.

Port Manager

The PORT MANAGER link has links to the following web pages:

- "Port Basic Settings" on page 341
- "Port Monitoring" on page 342
- "VLAN Traffic Class" on page 343
- "Port Control" on page 344
- "Rate Limiting" on page 346

Note: In all port based configuration pages, the port number group links are provided on the top.

In the normal standalone operation of the switch, there is only one link and the corresponding port configuration is displayed below it.

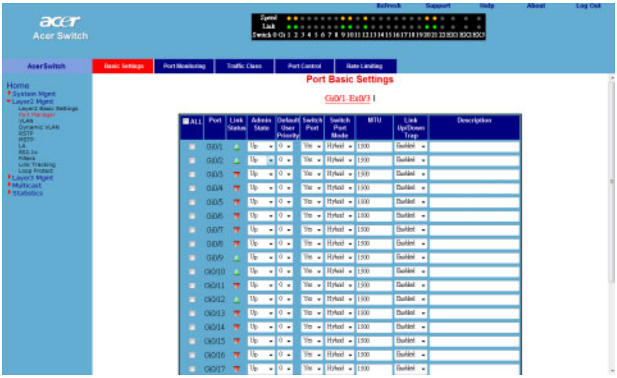
In case of stacking, multiple groups of port links are displayed. These links provide the configuration of ports from different stack member switches. To view the configuration of ports from a particular stack member switch, select the corresponding port links. For example, if three switches having switch identifier as 1, 2, and 3 are stacked together, the links will be as follows.

Gi1/1-Ex1/2 | Gi2/1-Ex2/2 | Gi3/1-Ex3/2

So to view the ports of switch 2, you need to select the Gi2/1-Ex2/2 link.

Port Basic Settings

Figure 4-218. Port Basic Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
Basic Settings
Port Monitoring
Traffic Class
Port Control
Rate Limiting
Port Basic Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
ALL
Port
Link Status
Admin State
Default User Priority
Switch Port
Switch Port Mode
MTU
Link Up/Down Trap
Description

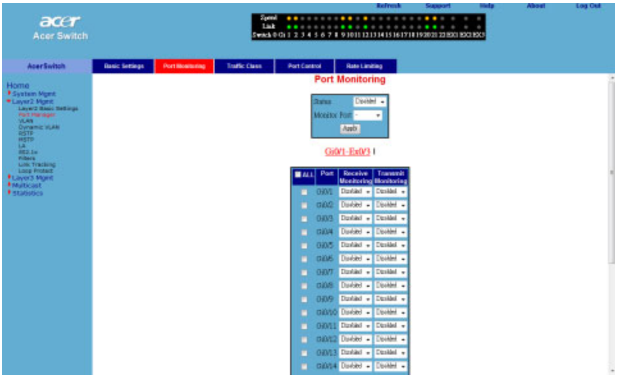
Clicking the BASIC SETTINGS tab brings up the PORT BASIC SETTINGS page, which allows you to configure port status and mode information. This page also helps configuring priority and MTU. The parameters for this page are shown in the following table.

Parameter	Description
Port	This displays the port number.
Link status	This column shows the physical link status as an UP or Down arrow. A green up arrow indicates that the status of the port is up, while the red down arrow indicates that the status of the port is down.
Admin State	This parameter allows you to administratively configure the admin state as *Up* or *Down*.
Default User Priority	This parameter allows you to set the priority from *0* to *7*.
Switch Port	By default all ports are switch ports for layer 2 switching. To configure a port as a layer 3 routed port, choose *No*.
Switch Port Mode	Use this control allows to set the access mode as either *Trunk* or *Hybrid*.

Parameter	Description
MTU	This sets the MTU value. The Minimum is *90* and Maximum is *16338*. A port must be administrativly down in order to change the MTU.
Link Up/Down Trap	This parameter enables or disables SNMP trap generation for port up and down events.

Port Monitoring

Figure 4-219. Port Monitoring


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch
AcerSwitch
Basic Settings
Port Monitoring
Traffic Class
Port Control
Rate Limiting
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Apply
Gi0/1-Ex0/3

Port Monitoring

Status: Disabled
Monitor Port: -

☐ ALL	Port	Receive Monitoring	Transmit Monitoring
☐	Gi0/1	Disabled	Disabled
☐	Gi0/2	Disabled	Disabled
☐	Gi0/3	Disabled	Disabled
☐	Gi0/4	Disabled	Disabled
☐	Gi0/5	Disabled	Disabled
☐	Gi0/6	Disabled	Disabled
☐	Gi0/7	Disabled	Disabled
☐	Gi0/8	Disabled	Disabled
☐	Gi0/9	Disabled	Disabled
☐	Gi0/10	Disabled	Disabled
☐	Gi0/11	Disabled	Disabled
☐	Gi0/12	Disabled	Disabled
☐	Gi0/13	Disabled	Disabled
☐	Gi0/14	Disabled	Disabled

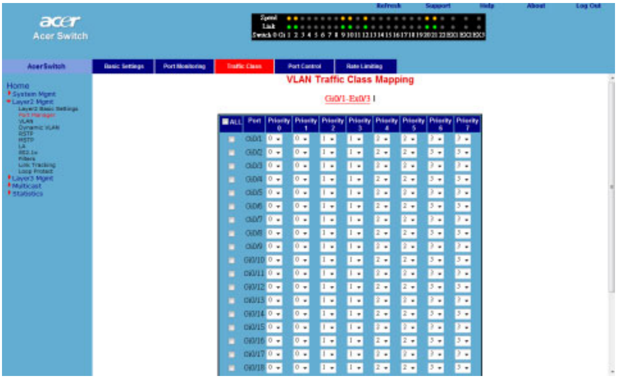
Clicking the PORT MONITORING tab brings up the PORT MONITORING page, which allows you to enable or disbale monitoring on port interface. The parameters for this page are shown in the following table.

Parameter	Description
Status	This parameter enables or disables the port monitoring.
Port	This displays the port number.

Parameter	Description
Receive Monitoring	This parameter enables or disables the receive monitoring.
Trasmit Monitoring	This parameter enables or disables the transmit monitoring.

VLAN Traffic Class

Figure 4-220. VLAN Traffic Class Mapping


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX0 EX1 EX2 EX3
AcerSwitch
Basic Settings
Port Monitoring
Traffic Class
Port Control
Rate Limiting
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
VLAN Traffic Class Mapping
Gi0/1-Ex0/3 |

☐ ALL	Port	Priority 0	Priority 1	Priority 2	Priority 3	Priority 4	Priority 5	Priority 6	Priority 7
☐	Gi0/1	0	0	1	1	2	2	3	3
☐	Gi0/2	0	0	1	1	2	2	3	3
☐	Gi0/3	0	0	1	1	2	2	3	3
☐	Gi0/4	0	0	1	1	2	2	3	3
☐	Gi0/5	0	0	1	1	2	2	3	3
☐	Gi0/6	0	0	1	1	2	2	3	3
☐	Gi0/7	0	0	1	1	2	2	3	3
☐	Gi0/8	0	0	1	1	2	2	3	3
☐	Gi0/9	0	0	1	1	2	2	3	3
☐	Gi0/10	0	0	1	1	2	2	3	3
☐	Gi0/11	0	0	1	1	2	2	3	3
☐	Gi0/12	0	0	1	1	2	2	3	3
☐	Gi0/13	0	0	1	1	2	2	3	3
☐	Gi0/14	0	0	1	1	2	2	3	3
☐	Gi0/15	0	0	1	1	2	2	3	3
☐	Gi0/16	0	0	1	1	2	2	3	3
☐	Gi0/17	0	0	1	1	2	2	3	3
☐	Gi0/18	0	0	1	1	2	2	3	3

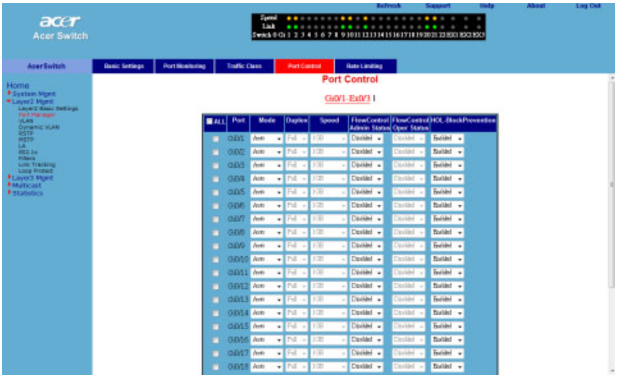
Clicking the TRAFFIC CLASS tab brings up the VLAN TRAFFIC CLASS MAPPING page, which allows you to map a priority to a traffic class. The parameters for this page are shown in the following table.

Parameter	Description
Port	This displays the port number.
Priority 0	This parameter chooses any traffic class 0 to 7 to map with priority 0.
Priority 1	This parameter chooses any traffic class 0 to 7 to map with priority 1.

Parameter	Description
Priority 2	This parameter chooses any traffic class 0 to 7 to map with priority 2.
Priority 3	This parameter chooses any traffic class 0 to 7 to map with priority 3.
Priority 4	This parameter chooses any traffic class 0 to 7 to map with priority 4.
Priority 5	This parameter chooses any traffic class 0 to 7 to map with priority 5.
Priority 6	This parameter chooses any traffic class 0 to 7 to map with priority 6.
Priority 7	This parameter chooses any traffic class 0 to 7 to map with priority 7.

Port Control

Figure 4-221. Port Control


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
Basic Settings
Port Monitoring
Traffic Class
Port Control
Rate Limiting
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

Port Control

Gi0/1-Ex0/3 |

☐ ALL	Port	Mode	Duplex	Speed	FlowControl Admin Status	FlowControl Oper Status	HOL-BlockPrevention
☐	Gi0/1	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/2	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/3	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/4	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/5	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/6	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/7	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/8	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/9	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/10	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/11	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/12	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/13	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/14	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/15	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/16	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/17	Auto	Full	1GB	Disabled	Disabled	Enabled
☐	Gi0/18	Auto	Full	1GB	Disabled	Disabled	Enabled

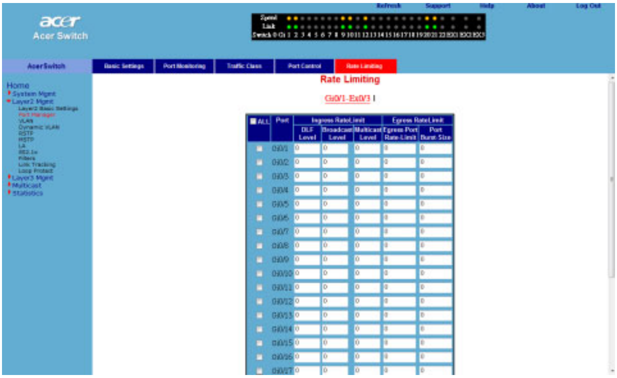
Clicking the PORT CONTROL tab brings up the PORT CONTROL page, which allows you to configure specific parameters of the port. You can choose between *Auto-negotiation* and *No-negotiation* for a port. If

No-negotiation is chosen, then the speed of the link, FlowControl and duplex modes can be configured. The parameters for this page are shown in the following table.

Parameter	Description
Port	This displays the port number.
Mode	This parameter allows you to select either *Auto Negotiation* or *No-negotiation*.
Duplex	This parameter allows you to select either *Full Duplex* or *Half Duplex*.
Speed	This parameter allows you to select the speed as *10 Mbps*, *100 Mbps* or *1 Gbps*.
Flow Control Admin Status	This parmeter allows you to specify the Flow Control Admin Status as either *Disabled*, Trasmit Flow Control *Enabled*, Receive Flow Control *Enabled* or both Transmit and Receive Flow Control *Enabled*.
Flow Control Operation Status	This parameter displays the status of the flow control.
HOL Block Prevention	This parameter allows you to enable or disable Head of Line block prevention.

Rate Limiting

Figure 4-222. Rate Limiting


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Port Monitoring
Traffic Class
Port Control
Rate Limiting
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

Rate Limiting

Gi0/1-Ex0/3 |

☐ ALL	Port	Ingress RateLimit			Egress RateLimit	
		DLF Level	Broadcast Level	Multicast Level	Egress Port Rate-Limit	Port Burst Size
☐	Gi0/1	0	0	0	0	0
☐	Gi0/2	0	0	0	0	0
☐	Gi0/3	0	0	0	0	0
☐	Gi0/4	0	0	0	0	0
☐	Gi0/5	0	0	0	0	0
☐	Gi0/6	0	0	0	0	0
☐	Gi0/7	0	0	0	0	0
☐	Gi0/8	0	0	0	0	0
☐	Gi0/9	0	0	0	0	0
☐	Gi0/10	0	0	0	0	0
☐	Gi0/11	0	0	0	0	0
☐	Gi0/12	0	0	0	0	0
☐	Gi0/13	0	0	0	0	0
☐	Gi0/14	0	0	0	0	0
☐	Gi0/15	0	0	0	0	0
☐	Gi0/16	0	0	0	0	0
☐	Gi0/17	0	0	0	0	0

Clicking the RATE LIMITING tab brings up the RATE LIMITING page (Figure 4-223), which allows you to configure rate limiting for the port interface. The parameters for this page are shown in the following table.

Parameter	Description
Port	This displays the port number.
The following parameters are configurable for Ingress Rate Limiting.	
DLF Level	This parameter allows you to specify the destination lookup failure packets per second.
Broadcast Level	This parameter allows you to specify the broadcast packets per second.
Multicast Level	This parameter allows you to specify the multicast packets per second.
The following parameters are configurable for Egress Rate Limiting.	

Parameter	Description
Egress Port Rate Limit	This parameter allows you to specify the egress limit of packets per second.
Egress Port Burst Size	This parameter allows you to specify the egress limit of packet burst size.

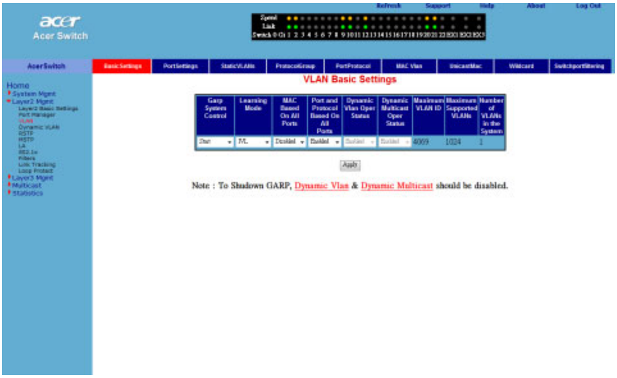
VLAN

The VLAN link allows to configure the VLAN information. VLAN configuration information has been provided in the following pages:

- "VLAN Basic Settings" on page 348
- "Port Settings" on page 350
- "Static VLAN" on page 351
- "Protocol Group" on page 352
- "Port Protocol" on page 352
- "MAC Based VLAN" on page 353
- "Unicast MAC" on page 354
- "Wildcard" on page 355
- "Switch Port VLAN" on page 356

VLAN Basic Settings

Figure 4-223. VLAN Basic Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
BasicSettings
PortSettings
StaticVLANs
ProtocolGroup
PortProtocol
MAC Vlan
UnicastMac
Wildcard
Switchportfiltering
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Apply

VLAN Basic Settings

Garp System Control	Learning Mode	MAC Based On All Ports	Port and Protocol Based On All Ports	Dynamic Vlan Oper Status	Dynamic Multicast Oper Status	Maximum VLAN ID	Maximum Supported VLANs	Number of VLANs in the System
Start	IVL	Disabled	Enabled	Enabled	Enabled	4069	1024	1

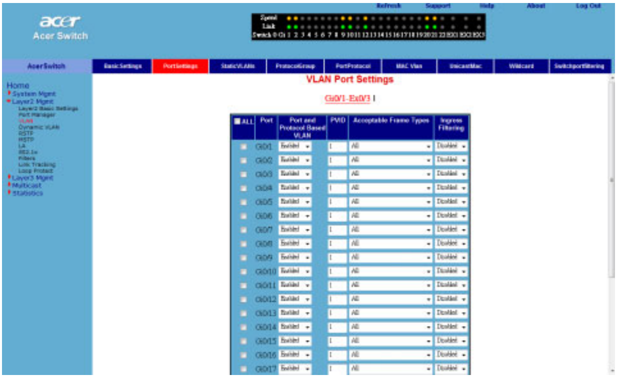
Note : To Shutdown GARP, Dynamic Vlan & Dynamic Multicast should be disabled.

Clicking the BASIC SETTINGS tab brings up the VLAN BASIC SETTINGS page (Figure 4-223), which displays VLAN global configuration information. The parameters for this page are shown in the following table.

Parameter	Description
Garp System Control	This parameter starts or shuts down GARP in the switch.
Learning Mode	This parameter specifies the Learning Mode (*Independent, Shared, Hybrid* or *VLAN Learning*).
VLAN Version	This parameter specifies the VLAN version supported.
Maximum VLAN ID	This parameter specifies the largest (4094) valid VLAN ID, which this switch can accept, above which all will be discarded.
Maximum Supported VLANs	This parameter specifies the maximum number of VLANs that this device can scale.
Number of VLANs in the System	This parameter specifies the active number of VLANs configured in the device.
MAC Based on All Ports	This parameter enables or disables the per Port MAC based classification.
Port and Protocol Based on all Ports	This parameter enables or disables the per Port Protocol based classification.

In addition, the BASIC SETTINGS page provides the configuration3 of Bridge Mode (*Customer /Provider*) and the priority for tunneled STP BPDUs. When you configure BRIDGE MODE TO PROVIDER, the Port Protocol based classification and MAC-based classification on all ports must be disabled.

Port Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX0 EX2 EX3
AcerSwitch
BasicSettings
PortSettings
StaticVLANs
ProtocolGroup
PortProtocol
MAC Vlan
UnicastMac
Wildcard
Switchportfiltering
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

VLAN Port Settings

Gi0/1-Ex0/3 |

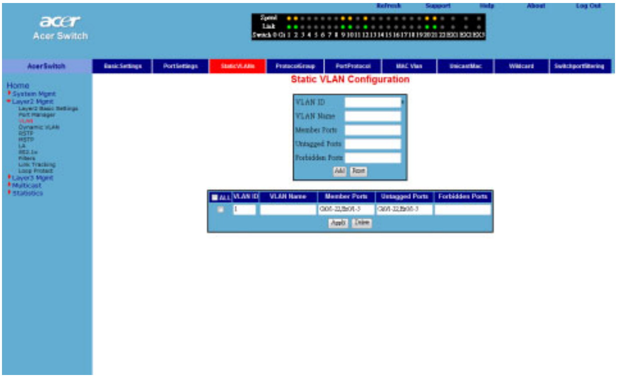
☐ ALL	Port	Port and Protocol Based VLAN	PVID	Acceptable Frame Types	Ingress Filtering
☐	Gi0/1	Enabled	1	All	Disabled
☐	Gi0/2	Enabled	1	All	Disabled
☐	Gi0/3	Enabled	1	All	Disabled
☐	Gi0/4	Enabled	1	All	Disabled
☐	Gi0/5	Enabled	1	All	Disabled
☐	Gi0/6	Enabled	1	All	Disabled
☐	Gi0/7	Enabled	1	All	Disabled
☐	Gi0/8	Enabled	1	All	Disabled
☐	Gi0/9	Enabled	1	All	Disabled
☐	Gi0/10	Enabled	1	All	Disabled
☐	Gi0/11	Enabled	1	All	Disabled
☐	Gi0/12	Enabled	1	All	Disabled
☐	Gi0/13	Enabled	1	All	Disabled
☐	Gi0/14	Enabled	1	All	Disabled
☐	Gi0/15	Enabled	1	All	Disabled
☐	Gi0/16	Enabled	1	All	Disabled
☐	Gi0/17	Enabled	1	All	Disabled

Clicking the PORT SETTINGS tab brings up the VLAN PORT SETTINGS page, which is used to associate the VLAN ID to the port for Port based VLAN classification.

While associating different ports to VLANs, you can also configure INGRESS FILTERING (at the port level) and ACCEPTABLE FRAME TYPES (accept *Tagged Frame Alone* or *All* frames).

The other configurations provided in this page are, enabling/disabling per Port MAC based classification and Port Protocol based classification, enabling/disabling of tunneling and enabling/disabling of STP BPDU Tunneling. To enable STP BPDU Tunneling on an interface, you must first enable tunneling on that interface.

Static VLAN

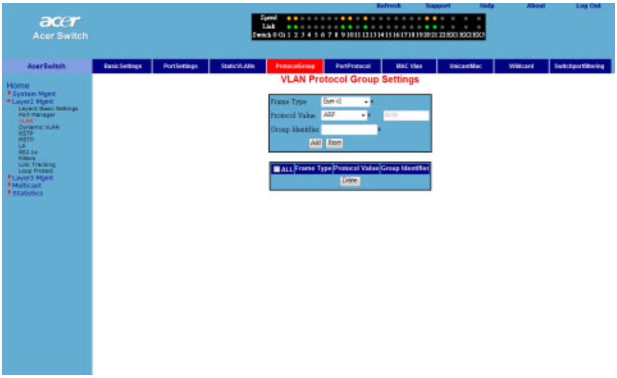

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
BasicSettings
PortSettings
StaticVLANs
ProtocolGroup
PortProtocol
MAC Vlan
UnicastMac
Wildcard
Switchportfiltering
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Static VLAN Configuration
VLAN ID
VLAN Name
Member Ports
Untagged Ports
Forbidden Ports
Add
Reset
ALL
VLAN ID
VLAN Name
Member Ports
Untagged Ports
Forbidden Ports
1
Apply
Delete

Clicking the STATIC VLANs tab brings up the STATIC VLAN CONFIGURATION page, which allows you to configure the VLAN related information statically.

Using the first table you can create new entries for uncreated VLANs. VLAN ID is the mandatory field in configuring a VLAN. You can also enter a VLAN NAME, MEMBER PORT LIST, UNTAGGED PORT and the FORBIDDEN PORTS for a VLAN.

The second table displays the VLAN configurations saved in the switch.

Protocol Group


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 HX1 HX2 HX3
AcerSwitch
BasicSettings
PortSettings
StaticVLANs
ProtocolGroup
PortProtocol
MAC Vlan
UnicastMac
Wildcard
Switchportfiltering
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Add
Reset
Delete

VLAN Protocol Group Settings

Frame Type: Enet v2

Protocol Value: ARP

Group Identifier:

☐ ALL	Frame Type	Protocol Value	Group Identifier

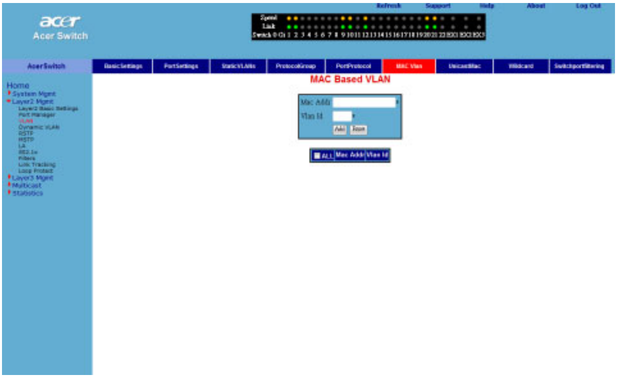
Clicking the Protocol Group tab brings up the VLAN Protocol Group Settings page, which is used to map Protocol Templates to Protocol Group Identifiers.

The Frame Type gives you the data-link encapsulation format. The Protocol Value is the value of the protocol in a protocol template. The Group ID represents a group of protocols that are associated together.

Port Protocol

Clicking the Port Protocol tab brings up the Port VLAN Protocol Settings page (not shown), which displays a table used for Port and Protocol based VLAN classification. The Group ID designates a group of protocols in the Protocol Group Database. The VLAN ID is the ID associated with a group of protocols for each port.

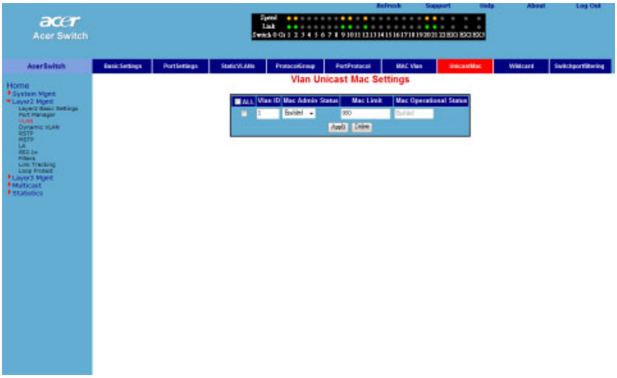
MAC Based VLAN


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch
AcerSwitch
BasicSettings
PortSettings
StaticVLANs
ProtocolGroup
PortProtocol
MAC Vlan
UnicastMac
Wildcard
Switchportfiltering
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
MAC Based VLAN
Mac Addr
Vlan Id
Add
ALL
Mac Addr
Vlan Id

Clicking the MAC BASED VLAN tab brings up the VLAN PORT MAC MAP page, which allows you to configure MAC based VLANs. The parameters for this page are shown in the following table.

Parameter	Description
Map Addr	This parameter specifies the Port MAC-Map address.
VLAN ID	This parameter specifies the VLAN identifier for this MAC based VLAN

Unicast MAC


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
BasicSettings
PortSettings
StaticVLANs
ProtocolGroup
PortProtocol
MAC Vlan
UnicastMac
Wildcard
Switchportfiltering
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Apply
Delete

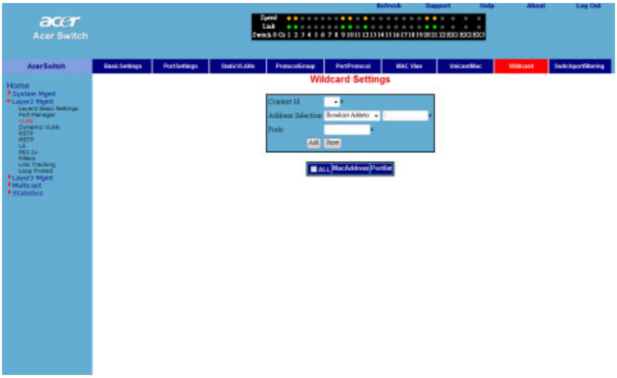
Vlan Unicast Mac Settings

☐ ALL	Vlan ID	Mac Admin Status	Mac Limit	Mac Operational Status
☐	1	Enabled	980	Enabled

Clicking the UNICAST MAC tab brings up the VLAN UNICAST MAC SETTINGS page, which allows you to configure the various parameters for VLAN Unicast MAC settings. The parameters for this page are shown in the following table.

Parameter	Description
VLAN ID	This parameter specifies the VLAN Identifier.
MAC Admin Status	This parameter specifies the MAC administration status, which can be enabled or disabled.
MAC Limit	This parameter indicates the MAC limit.
MAC Operational Status	This parameter specifies the MAC operational Status, which can be enabled or disabled.

Wildcard

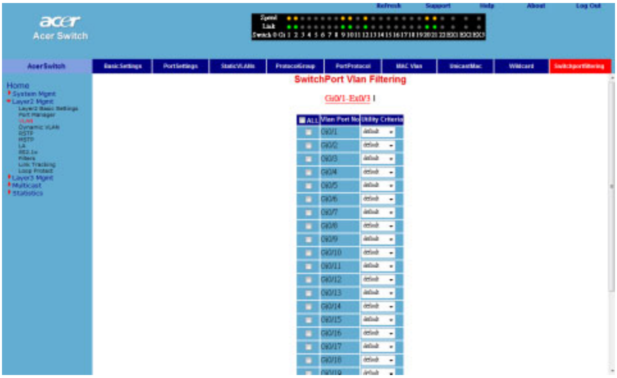

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 BX01 BX02 BX03
AcerSwitch
BasicSettings
PortSettings
StaticVLANs
ProtocolGroup
PortProtocol
MAC Vlan
UnicastMac
Wildcard
Switchportfiltering
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Wildcard Settings
Content Id
Ports
Add
Reset
ALL
MacAddress
Portlist

Address Selection: Broadcast Address

Clicking the WILDCARD tab brings up the WILDCARD SETTINGS page, which configures wildcard MAC addresses and ports for VLANs. The parameters for this page are shown in the following table.

Parameter	Description
Content ID	This parameter allows you to select the CONTENT ID.
Address Selection	Use this parameter to select the address type.
Ports	This parameter allows you to enter a port.

Switch Port VLAN


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
BasicSettings
PortSettings
StaticVLANs
ProtocolGroup
PortProtocol
MAC Vlan
UnicastMac
Wildcard
Switchportfiltering
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

SwitchPort Vlan Filtering

Gi0/1-Ex0/3 |

☐ ALL	Vlan Port No	Utility Criteria
☐	Gi0/1	default
☐	Gi0/2	default
☐	Gi0/3	default
☐	Gi0/4	default
☐	Gi0/5	default
☐	Gi0/6	default
☐	Gi0/7	default
☐	Gi0/8	default
☐	Gi0/9	default
☐	Gi0/10	default
☐	Gi0/11	default
☐	Gi0/12	default
☐	Gi0/13	default
☐	Gi0/14	default
☐	Gi0/15	default
☐	Gi0/16	default
☐	Gi0/17	default
☐	Gi0/18	default
☐	Gi0/19	default

Clicking the SWITCH PORT FILTERING tab brings up the SWITCHPORT VLAN FILTERING page, which configures utility criteria for SwitchPort Vlan filtering. The parameters for this page are shown in the following table.

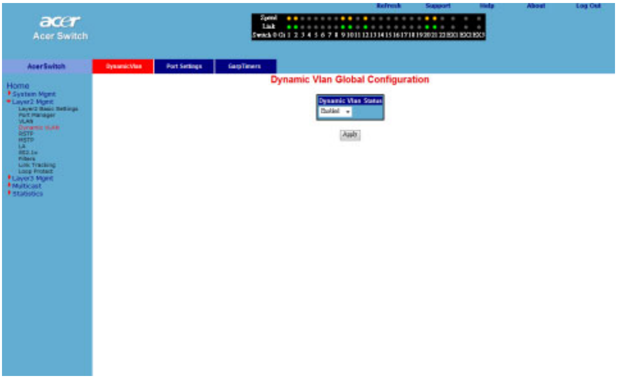
Parameter	Description
VLAN Port No.	This parameter displays the VLAN Port Number, which can be selected by the check box to the left of the column.
Utility Criteria	Use this parameter to select the utility criteria for the VLAN port selected.

Dynamic Vlan

The Dynamic VLAN link allows you to configure the Dynamic VLAN information. Dynamic VLAN configuration information has been provided in the following pages

- "Dynamic VLAN Global Configuration" on page 357
- "Port Configuration" on page 358
- "GARP Timers" on page 359

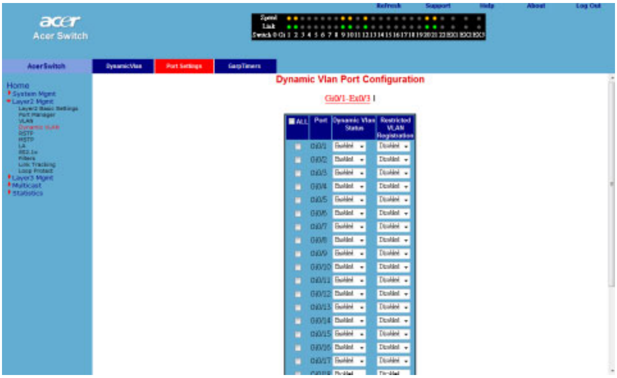
Dynamic VLAN Global Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
DynamicVlan
Port Settings
GarpTimers
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Dynamic Vlan Global Configuration
Apply

Dynamic Vlan Status: Enabled

Clicking the DYNAMIC VLAN tab brings up the DYNAMIC VLAN GLOBAL CONFIGURATION page, which allows you to enable or disable Dynamic VLAN.

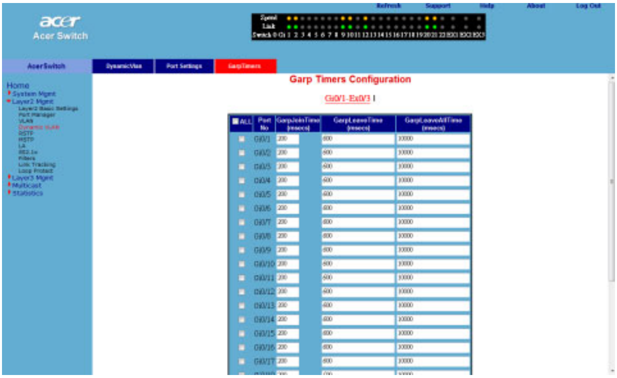
Port Configuration


acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
DynamicVlan
Port Settings
GarpTimers
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Dynamic Vlan Port Configuration
Gi0/1-Ex0/3
ALL
Port
Dynamic Vlan Status
Restricted VLAN Registration

Clicking the PORT SETTINGS link brings up the DYNAMIC VLAN PORT CONFIGURATION page, which allows you to configure parameters for Dynamic VLAN ports. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter displays the Port Number, which can be selected by the check box to the left of the column.
Dynamic VLAN Status	Use this parameter to enable/disable the DYNAMIC VLAN STATUS.
Restricted VLAN Registration	This parameter allows you to enable/disable RESTRICTED VLAN REGISTRATION.

GARP Timers


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX0 EX0 EX0
AcerSwitch
DynamicVlan
Port Settings
GarpTimers
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

Garp Timers Configuration

Gi0/1-Ex0/3 I

☐ ALL	Port No	GarpJoinTime (msecs)	GarpLeaveTime (msecs)	GarpLeaveAllTime (msecs)
☐	Gi0/1	200	600	10000
☐	Gi0/2	200	600	10000
☐	Gi0/3	200	600	10000
☐	Gi0/4	200	600	10000
☐	Gi0/5	200	600	10000
☐	Gi0/6	200	600	10000
☐	Gi0/7	200	600	10000
☐	Gi0/8	200	600	10000
☐	Gi0/9	200	600	10000
☐	Gi0/10	200	600	10000
☐	Gi0/11	200	600	10000
☐	Gi0/12	200	600	10000
☐	Gi0/13	200	600	10000
☐	Gi0/14	200	600	10000
☐	Gi0/15	200	600	10000
☐	Gi0/16	200	600	10000
☐	Gi0/17	200	600	10000

Clicking the GARP TIMERS tab brings up the GARP TIMERS CONFIGURATION page, which displays the various parameters for changing Garp times. The parameters for this page are shown in the following table.

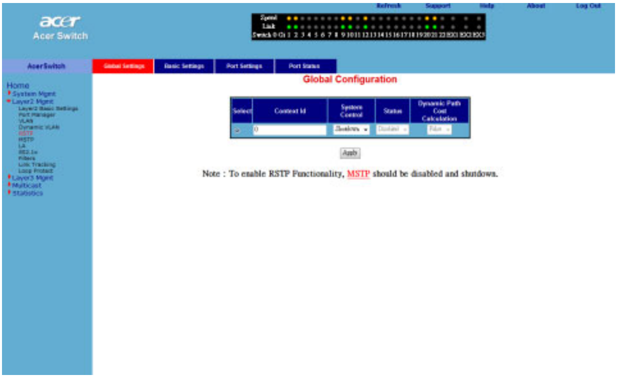
Parameter	Description
Port No	This parameter displays the Port Number.
Garp Join Time (msecs)	This parameter allows you to change the Garp Join Time.
Garp Leave Time (msecs)	This parameter allows you to change the Garp Leave Time.
Garp Leave All Time (msecs)	This parameter allows you to change the Garp Leave All Time.

RSTP

The RSTP link provides links to the following configuration pages:

- “RSTP Global Settings” on page 360
- “RSTP Basic Settings” on page 361
- “Port Settings”
- “Port Status” on page 364

RSTP Global Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Global Settings
Basic Settings
Port Settings
Port Status
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Apply

Global Configuration

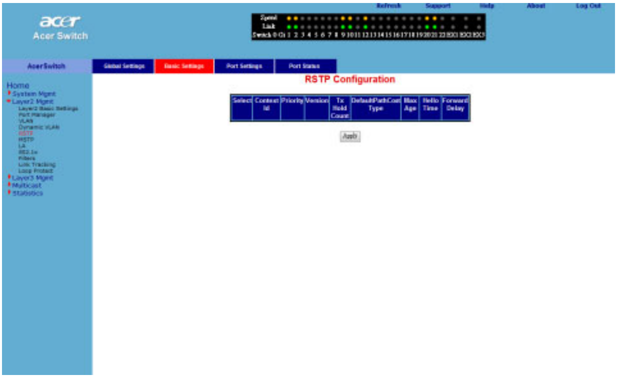
Select	Context Id	System Control	Status	Dynamic Path Cost Calculation
●	0	Shutdown	Disabled	False

Note : To enable RSTP Functionality, MSTP should be disabled and shutdown.

Clicking the GLOBAL SETTINGS tab brings up the GLOBAL CONFIGURATION page, which allows you to configure RSTP global parameters. The parameters for this page are shown in the following table.

Parameter	Description
System Control	This parameter starts or Shutsdown RSTP in the switch.
Status	This parameter allows you to enable/disable the protocol at a global level on the switch.
Dynamic Path Cost Calculation	This parameter allows you to enable or disable the DYNAMIC PATH COST CALCULATION.

RSTP Basic Settings

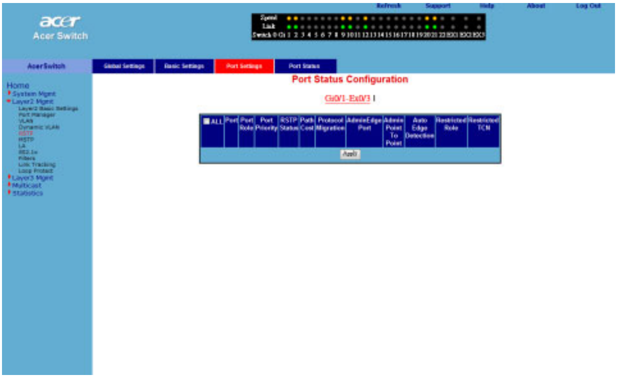

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Global Settings
Basic Settings
Port Settings
Port Status
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
RSTP Configuration
Select
Context Id
Priority
Version
Tx Hold Count
DefaultPathCost Type
Max Age
Hello Time
Forward Delay
Apply

Clicking the BASIC SETTINGS tab brings up the RSTP CONFIGURATION page, which displays the various parameters for RSTP configuration. The parameters for this page are shown in the following table.

Parameter	Description
System Control	This parameter allows you to start or shutsdown RSTP in the switch.
RSTP Status	This parameter allows you to enable/disable the protocol at a global level on the switch.
Compatibility	This parameter allows you to choose to run the protocol as an RSTP or STP compatible version.
Bridge Priority	This parameter specifies the BRIDGE PRIORITY, which can be used to select the root bridge.
Transmit Hold Count	This parameter specifies the maximum number of packets that can be sent in a given interval. This is configured to avoid flooding.

Parameter	Description
Default Path Cost Version	This parameter allows you to configure the path cost either as a *16-bit* value or a *32-bit* value. This is provided mainly for backward compatibility with STAP.

Port Settings

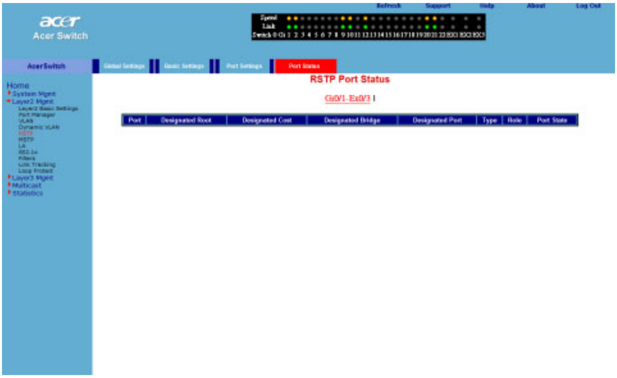

Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
Global Settings
Basic Settings
Port Settings
Port Status
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Port Status Configuration
Gi0/1-Ex0/3
☐ ALL
Port
Port Role
Port Priority
RSTP Status
Path Cost
Protocol Migration
AdminEdge Port
Admin Point To Point
Auto Edge Detection
Restricted Role
Restricted TCN
Apply

Clicking the Port Settings tab brings up the Port Status Configuration page, which allows you to set the configuration per port related to RSTP. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the port identifier.
Status	This parameter enables or disables the RSTP protocol status on a particular port.
Priority	This parameter specifies the port priority used in role selection.
Path Cost	This parameter specifies the path cost associated with this port.

Parameter	Description
Protocol Migration	This parameter controls the migration from RSTP to STP, if the other side of the switch runs STP. The migration takes place only if this is *Enabled*.
PortFast	This parameter must be configured, if the corresponding port is an edge port.
Point-to-Point	This parameter allows you to configure ports explicitly as *Point-to-point* (Force true), *Non-point-to-point* or leave the decision to be made *Dynamically* (from the AL or MAC layer).
Auto Edge Status	If this parameter is set to *true*, the edge port status is dynamically calculated.
Restricted Role	This parameter specifies the RESTRICTED ROLE status of the port.
Restricted TCN	This parameter indicates the RESTRICTED TCN status of the port.

Port Status


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Global Settings
Basic Settings
Port Settings
Port Status
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

RSTP Port Status

Gi0/1-Ex0/3 |

Port	Designated Root	Designated Cost	Designated Bridge	Designated Port	Type	Role	Port State

Clicking the PORT STATUS tab brings up the RSTP PORT STATUS page, which displays RSTP port specific information. The parameters for this page are shown in the following table.

Parameter	Description
Designated Root	This parameter specifies the unique Bridge Identifier of the bridge that is recorded as the root for the segment to which the port is attached.
Designated Cost	This parameter specifies the path cost of the Designated Port of the segment connected to this port.
Designated Bridge	This parameter specifies the Bridge Identifier of the bridge, which this port considers to be the Designated Bridge for this port's segment.
Designated Port	This parameter specifies the Port Identifier of the port on the Designated Bridge for this port's segment.

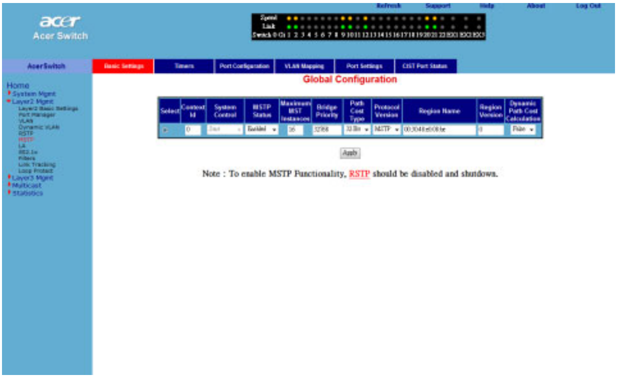
Parameter	Description
Type	This parameter specifies the operational point-to-point status of the LAN segment attached to this port. It indicates whether a port is considered to have a *Point-to-point* connection or *Shared Media*.
Role	This parameter specifies the port's current role as defined by the Spanning Tree Protocol.
Port State	This parameter specifies the port's current state as defined by application of the Spanning Tree Protocol.

MSTP

The MSTP link leads you to the following configuration pages:

- "MSTP Basic Settings" on page 366
- "MSTP Timers" on page 368
- "Port Configuration" on page 369
- "VLAN Mapping" on page 370
- "Port Settings" on page 371
- "CIST Port Status" on page 372

MSTP Basic Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
Basic Settings
Timers
Port Configuration
VLAN Mapping
Port Settings
CIST Port Status
Global Configuration
Apply

Select	Context Id	System Control	MSTP Status	Maximum MST Instances	Bridge Priority	Path Cost Type	Protocol Version	Region Name	Region Version	Dynamic Path Cost Calculation
○	0	Start	Enabled	16	32768	32 Bit	MSTP	00:30:48:e0:08:be	0	False

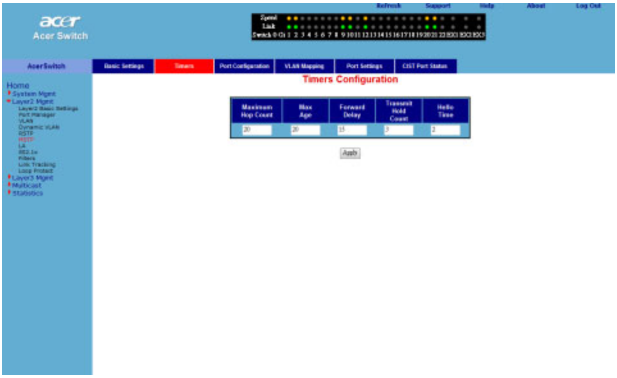
Note : To enable MSTP Functionality, RSTP should be disabled and shutdown.

Clicking the BASIC SETTINGS tab brings up the GLOBAL CONFIGURATION page, which can access the MSTP global configuration. The parameters for this page are shown in the following table.

Parameter	Description
System Control	This parameter *Starts* or *Shutsdown* MSTP in the switch.
MSTP Status	This parameter specifies the protocol that can be enabled/disabled at a global level on the switch using this field.

Parameter	Description
Compatibility	This parameter allows you to choose to run the protocol in *MSTP*, *RSTP* or an *STP* compatible version.
Bridge Priority	This parameter specifies the Priority value assigned to the bridge that is used to select the root bridge.
Transmit Hold Count	This parameter specifies the maximum number of packets that can be sent in a given interval. This is configured to avoid flooding.
Default Path Cost Version	This parameter allows you to configure the path cost either as a *16-bit* value or a *32-bit* value. This is provided mainly for backward compatibility with STAP.
Maximum Age (Seconds)	This parameter specifies the time period for which the information received in the RSTP BDPU is valid.
Forward Delay (Seconds)	This parameter specifies how fast a port changes its Spanning state when moving towards the Forwarding state.
Hop Counts (Seconds)	This parameter specifies the maximum number of bridges that a packet can cross before it will be dropped, to avoid infinite looping of the packets.
Region Name	This parameter specifies the name for the Region's configuration. By default, the region name will be equal to the Bridge MAC Address.
Region Version	This parameter specifies the version number of the configuration to be used.

MSTP Timers

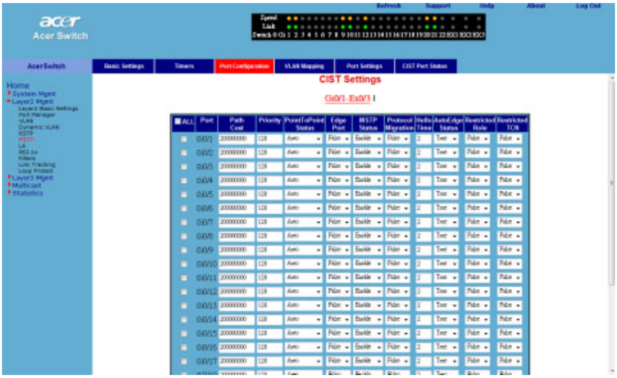

acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 HX1 HX2 HX3
AcerSwitch
Basic Settings
Timers
Port Configuration
VLAN Mapping
Port Settings
CIST Port Status
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Apply

Timers Configuration

Maximum Hop Count	Max Age	Forward Delay	Transmit Hold Count	Hello Time
20	20	15	3	2

Clicking the Timers tab brings up the Timers Configuration page, which configures the time for Maximum Hop Count, Forward Delay, Maximum Age, Transmit Hold Age and Hello Time.

Port Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Timers
Port Configuration
VLAN Mapping
Port Settings
CIST Port Status
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

CIST Settings

Gi0/1-Ex0/3 |

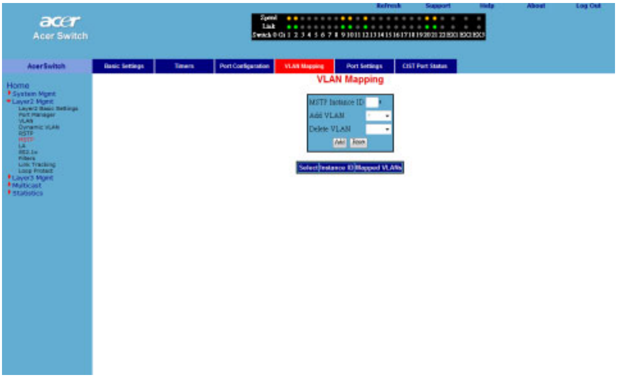
☐ ALL	Port	Path Cost	Priority	PointToPoint Status	Edge Port	MSTP Status	Protocol Migration	Hello Time	AutoEdge Status	Restricted Role	Restricted TCN
☐	Gi0/1	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/2	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/3	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/4	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/5	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/6	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/7	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/8	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/9	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/10	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/11	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/12	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/13	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/14	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/15	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/16	200000000	128	Auto	False	Enable	False	2	True	False	False
☐	Gi0/17	200000000	128	Auto	False	Enable	False	2	True	False	False

Clicking the PORT CONFIGURATION tab brings up the CIST SETTINGS page, which sets the configuration per Port related to MSTP. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the port identifier.
Admin Status	This parameter specifies the MSTP protocol status that can be enabled/disabled on the particular port.
Priority	This parameter specifies the port priority used in role selection.
Path Cost	This parameter specifies the path cost associated with this port.
Protocol Migration	This parameter controls the migration among MSTP, RSTP and STP protocols, if the other side of the switch runs a different mode. Migration takes place only if this is enabled.

Parameter	Description
Edge Status	This parameter must be configured if the corresponding port is an edge port.
Point-to-Point Status	This parameter allows you to configure the ports explicitly as point-to-point (*Force* true), as a non-point-to-point port, or leave the decision to be made dynamically (from the AL or MAC layer).
Hello Time (Seconds)	This parameter specifies the administrative value of Hello Time for the port.
Auto Edge Status	If set to *True*, the edge port status will be dynamically calculated.
Restricted Role	This parameter specifies the Restricted role status of the port.
Restricted TCN	This parameter indicates the Restricted TCN status of the port.

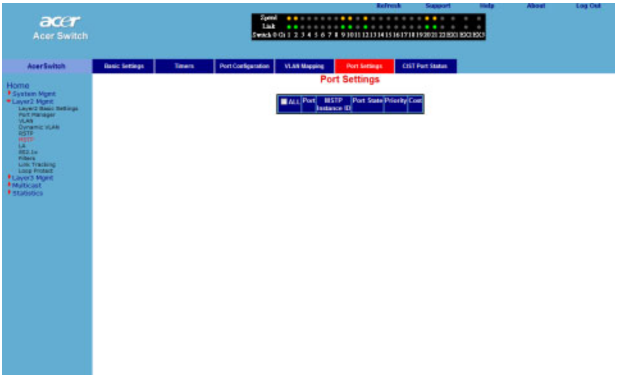
VLAN Mapping


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Timers
Port Configuration
VLAN Mapping
Port Settings
CIST Port Status
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
VLAN Mapping
MSTP Instance ID
Add VLAN
Delete VLAN
Add
Reset
Select
Instance ID
Mapped VLANs

Clicking the VLAN MAPPING tab brings up the VLAN MAPPING page, whose table contains one entry for each instance of MSTP. The parameters for this page are shown in the following table.

Parameter	Description
MSTP Instance ID	This parameter specifies the Instance ID, which is the index of the table.
Map VLAN	This parameter specifies the list of VLANs to be mapped to this instance of the spanning tree.
Unmap VLAN	This parameter specifies the list of VLANs to be unmapped from this instance of the spanning tree.

Port Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Timers
Port Configuration
VLAN Mapping
Port Settings
CIST Port Status
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

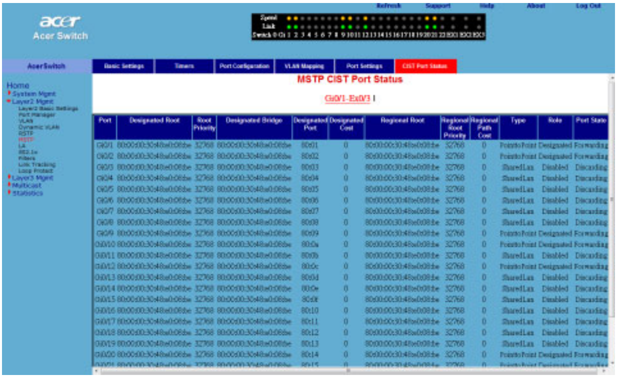
Port Settings

☐ ALL	Port	MSTP Instance ID	Port State	Priority	Cost

Clicking the PORT SETTINGS tab brings up the PORT SETTINGS page, which displays the various parameters for port settings. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the interface index of the port on which MSTP is being run.
MSTP Instance ID	This parameter specifies the instance ID of the STP that is associated with this instance.
Port State	This parameter specifies the current state of the port.
Priority	This parameter specifies the priority related to this port.
Cost	This parameter specifies the cost associated with this port, which will be added to the cost of any path that includes this port.

CIST Port Status


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Timers
Port Configuration
VLAN Mapping
Port Settings
CIST Port Status
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

MSTP CIST Port Status

Gi0/1-Ex0/3 |

Port	Designated Root	Root Priority	Designated Bridge	Designated Port	Designated Cost	Regional Root	Regional Root Priority	Regional Path Cost	Type	Role	Port State
Gi0/1	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:01	0	80:00:00:30:48:a0:08:be	32768	0	PointtoPoint	Designated	Forwarding
Gi0/2	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:02	0	80:00:00:30:48:a0:08:be	32768	0	PointtoPoint	Designated	Forwarding
Gi0/3	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:03	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/4	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:04	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/5	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:05	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/6	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:06	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/7	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:07	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/8	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:08	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/9	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:09	0	80:00:00:30:48:a0:08:be	32768	0	PointtoPoint	Designated	Forwarding
Gi0/10	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:0a	0	80:00:00:30:48:a0:08:be	32768	0	PointtoPoint	Designated	Forwarding
Gi0/11	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:0b	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/12	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:0c	0	80:00:00:30:48:a0:08:be	32768	0	PointtoPoint	Designated	Forwarding
Gi0/13	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:0d	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/14	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:0e	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/15	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:0f	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/16	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:10	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/17	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:11	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/18	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:12	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/19	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:13	0	80:00:00:30:48:a0:08:be	32768	0	SharedLan	Disabled	Discarding
Gi0/20	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:14	0	80:00:00:30:48:a0:08:be	32768	0	PointtoPoint	Designated	Forwarding
Gi0/21	80:00:00:30:48:a0:08:be	32768	80:00:00:30:48:a0:08:be	80:15	0	80:00:00:30:48:a0:08:be	32768	0	PointtoPoint	Designated	Forwarding

Clicking the CIST PORT STATUS tab brings up the MSTP CIST PORT STATUS page, which displays MSTP CIST port specific information. The parameters for this page are shown in the following table.

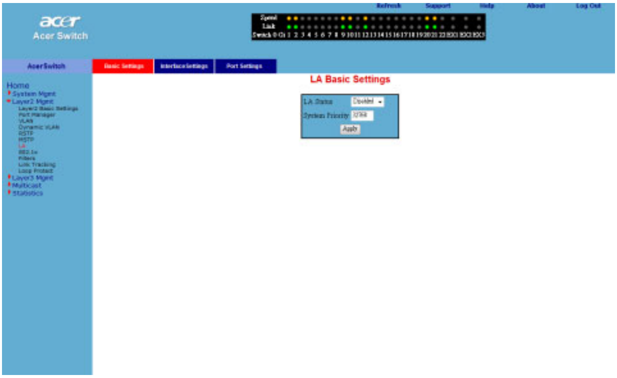
Parameter	Description
Designated Root	This parameter specifies the unique Bridge Identifier of the Bridge recorded as the Root for the segment to which the port is attached.
Designated Bridge	This parameter specifies the Bridge Identifier of the bridge, which this port considers to be the Designated Bridge for this port's segment.
Designated Port	This parameter specifies the Port Identifier of the port on the Designated Bridge for this port's segment.
Designated Cost	This parameter specifies the path cost of the Designated Port of the segment connected to this port.
Regional Root	This parameter specifies the unique Bridge Identifier of the bridge recorded as the CIST Regional Root Identifier in the configuration BPDUs transmitted.
Regional Path Cost	This parameter specifies the contribution of this port to the path cost of paths towards the CIST Regional Root, which includes this port.
Type	This parameter specifies the operational point-to-point status of the LAN segment attached to this port. It indicates whether a port is considered to have a point-to-point connection or shared media.
Role	This parameter specifies the ports current role as defined by the Spanning Tree Protocol.
Port State	This parameter specifies the port's current state as defined by the application of the Spanning Tree Protocol.

LA

The LA link provides links to the following configuration pages:

- "LA Basic Settings" on page 374
- "Interface Settings" on page 375
- "Port Settings" on page 376
- "Port Settings" on page 376
- "802.1x" on page 378

LA Basic Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 HX1 HX2 HX3
AcerSwitch
Basic Settings
Interface Settings
Port Settings
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Apply

LA Basic Settings

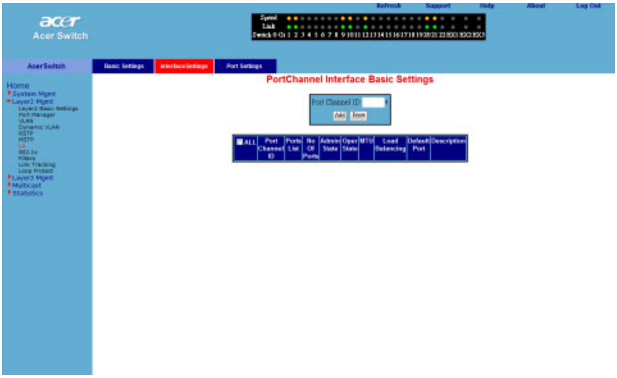
LA Status: Disabled

System Priority: 32768

Clicking the BASIC SETTINGS tab brings up the LA BASIC SETTINGS page, which displays the various parameters for LA basic settings. The parameters for this page are shown in the following table.

Parameter	Description
LA Status	This is used to enable or disable LA in the switch.
System Priority	This parameter specifies the priority value associated with the Actor's system ID.

Interface Settings

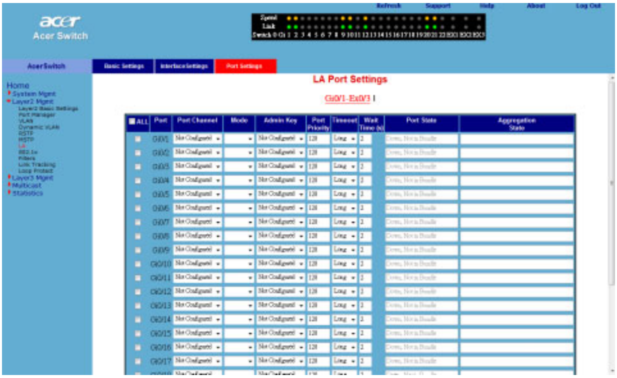

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0/Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
InterfaceSettings
Port Settings
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
PortChannel Interface Basic Settings
Port Channel ID
Add
Reset

☐ ALL	Port Channel ID	Ports List	No Of Ports	Admin State	Oper State	MTU	Load Balancing	Default Port	Description

Clicking the INTERFACE SETTINGS tab brings up the PORT CHANNEL INTERFACE BASIC SETTINGS page, which allows you to configure port channels. The parameters for this page are shown in the following table.

Parameter	Description
Port Channel ID	This parameter specifies the identifier of the port channel interface. The valids values are between *1* to *65535*.
Admin Status	This parameter administratively makes the port channel *Up* or *Down*.

Port Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
Basic Settings
InterfaceSettings
Port Settings
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

LA Port Settings

Gi0/1-Ex0/3 |

☐ ALL	Port	Port Channel	Mode	Admin Key	Port Priority	Timeout	Wait Time (s)	Port State	Aggregation State
☐	Gi0/1	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/2	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/3	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/4	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/5	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/6	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/7	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/8	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/9	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/10	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/11	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/12	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/13	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/14	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/15	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/16	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	
☐	Gi0/17	Not Configured		Not Configured	128	Long	2	Down, Not in Bundle	

Clicking the PORT SETTINGS tab brings up the LA PORT SETTINGS page, which configures LA properties at a per-port level. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the Interface Index.
Port Priority	This parameter specifies the priority value of the Port.
Mode	This parameter specifies whether the Port LACP activity is *Active* or *Passive*.
Port Channel	This parameter specifies the identifier of the port channel interface.
Timeout	This parameter sets the time within which LACP PDUs must be received on a port to avoid timing out of the Aggregated Link. If a *Long* timeout is chosen then the ports will time out of the Port Channel in 90-seconds. If a *Short* timeout is chosen then the ports will time out of the Port Channel in 3-seconds.

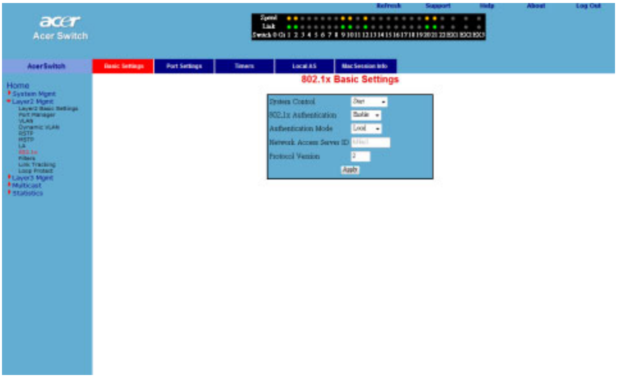
Parameter	Description
Wait Time	This parameter configures the waiting time for a port after receiving Partner information and before entering aggregation.
Port State	This parameter indicates the current state of the port with respect to Link Aggregation. The possible states are: • **Up in Bundle** - The port is an active member of the port channel. • **Up Individual** - The port is not a member of any port channel but its Oper-Status is Up. • **Standby** - The port is a member of the port channel but is currently in a standby state. • **Down** - The port’s Oper-Status is Down.
Aggregation State	This parameter displays the aggregation state information for every port channel.

802.1x

The 802.1x link provides link to the following configuration pages:

- “Basic Settings” on page 378
- “Port Settings” on page 379
- “Timers” on page 381
- “Local AS” on page 382
- “MAC Session Info” on page 383

Basic Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Port Settings
Timers
Local AS
Mac Session Info
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Apply

802.1x Basic Settings

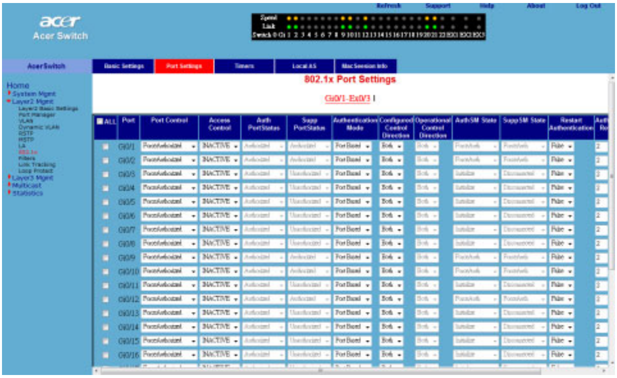
System Control: Start
802.1x Authentication: Enable
Authentication Mode: Local
Network Access Server ID: [illegible]
Protocol Version: 2

Clicking the BASIC SETTINGS tab brings up the 802.1X BASIC SETTINGS page, which displays the various 802.1x Basic Settings parameters. The parameters for this page are shown in the following table.

Parameter	Description
System Control	This parameter starts or shutsdown 802.1x in the switch.
802.1x Authentication	This parameter allows enabling or disabling of the 802.1x based port security feature in the switch.
Authentication Server	This parameter specifies the Authentication Server Location as *Remote* or *Local*.

Parameter	Description
Network Access Server ID	This parameter specifies the Authenticator ID, which originates the Access-Request Packets.

Port Settings

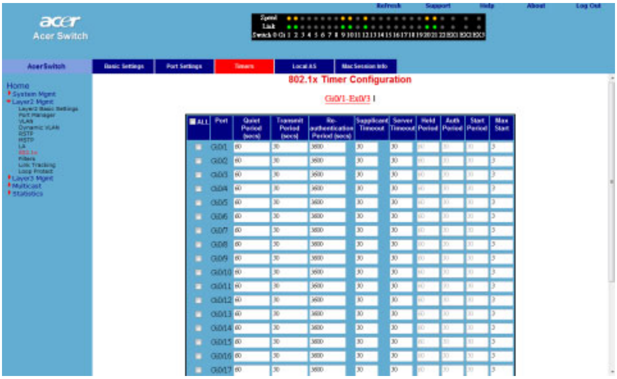

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Port Settings
Timers
Local AS
Mac Session Info
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
802.1x Port Settings
Gi0/1-Ex0/3
ALL
Port
Port Control
Access Control
Auth PortStatus
Supp PortStatus
Authentication Mode
Configured Control Direction
Operational Control Direction
AuthSM State
SuppSM State
Restart Authentication

Clicking the PORT SETTINGS tab brings up the 802.1X PORT SETTINGS page, which configures security information at the individual port levels. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the Index of the port for which its fields (such as PORT CONTROL, PORT AUTHORIZATION STATUS, and so on) are configured.

Parameter	Description
Port Control	This parameter specifies the control values of the Authenticator Port. The control values can be: • **Force Authorize** - All the traffic through this port will be allowed always. • **Force Unauthorize** - All the traffic through this port will be blocked always. • **Auto** - The 802.1x authentication process will be imposed over this port.
Port Authorization Status	This parameter specifies current status of the port either as *Authorized* or *Un-Authorized*.
Authentication Mode	This parameter specifies the configuration for selecting the AUTHENTICATION MODE to be *Port Based*.
Admin Control Direction	This parameter specifies whether security is to be imposed for • **In** - the incoming traffic • **Both** - both incoming and outgoing traffic
Operational Control Direction	This parameter specifies the current security status.
Port Initialize	This parameter specifies the initialization control for the port. Setting this value to *True* causes the port to be initialized. The value reverts to *False* once initialization is complete.
Maximum Authentication Request	This parameter specifies the maximum number of authentication requests that can be sent from the authenticator before getting a response from the supplicant.
Reauthentication	This parameter provides configuration to enable or disable the reauthentication mechanism on the port.

Timers


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
Basic Settings
Port Settings
Timers
Local AS
MacSession Info
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics

802.1x Timer Configuration

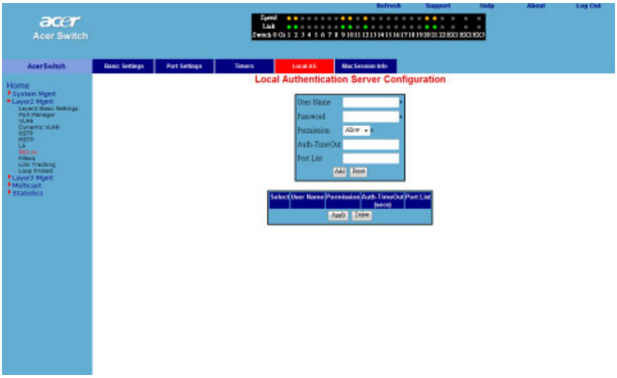
Gi0/1-Ex0/3 |

☐ ALL	Port	Quiet Period (secs)	Transmit Period (secs)	Re-authentication Period (secs)	Supplicant Timeout	Server Timeout	Held Period	Auth Period	Start Period	Max Start
☐	Gi0/1	60	30	3600	30	30	60	30	30	3
☐	Gi0/2	60	30	3600	30	30	60	30	30	3
☐	Gi0/3	60	30	3600	30	30	60	30	30	3
☐	Gi0/4	60	30	3600	30	30	60	30	30	3
☐	Gi0/5	60	30	3600	30	30	60	30	30	3
☐	Gi0/6	60	30	3600	30	30	60	30	30	3
☐	Gi0/7	60	30	3600	30	30	60	30	30	3
☐	Gi0/8	60	30	3600	30	30	60	30	30	3
☐	Gi0/9	60	30	3600	30	30	60	30	30	3
☐	Gi0/10	60	30	3600	30	30	60	30	30	3
☐	Gi0/11	60	30	3600	30	30	60	30	30	3
☐	Gi0/12	60	30	3600	30	30	60	30	30	3
☐	Gi0/13	60	30	3600	30	30	60	30	30	3
☐	Gi0/14	60	30	3600	30	30	60	30	30	3
☐	Gi0/15	60	30	3600	30	30	60	30	30	3
☐	Gi0/16	60	30	3600	30	30	60	30	30	3
☐	Gi0/17	60	30	3600	30	30	60	30	30	3

Clicking the TIMERS tab brings up the 802.1X TIMER CONFIGURATION page, which configures Timer parameters at the individual port level. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter is the index of the port for which fields such as QUIET PERIOD, TRANSMIT PERIOD, and such are configured.
Quiet Period (Seconds)	This parameter specifies the duration for which the authenticator will be silent and will not attempt to acquire a supplicant. It can be configured to any value in the range from *1* to *65535* seconds.
Transmit Period (Seconds)	This parameter specifies the time period used by the Authenticator State machine to define when the EAPOL PDU is to be transmitted. It can be configured to any value in the range from *1* to *65535* seconds.
Re-authentication Period (Seconds)	This parameter specifies the time between periodic re-authentication of the supplicant.

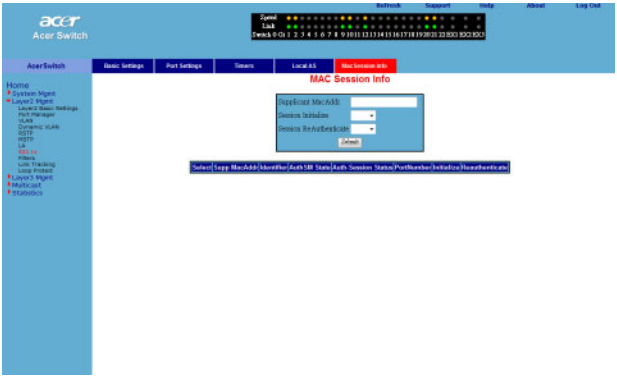
Local AS


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Port Settings
Timers
Local AS
MacSession Info
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Local Authentication Server Configuration
User Name
Password
Permission
Allow
Auth-TimeOut
Port List
Add
Reset
Select
User Name
Permission
Auth-TimeOut (secs)
Port List
Apply
Delete

Clicking the LOCAL AS tab brings up the LOCAL AUTHENTICATION SERVER CONFIGURATION page, which configures Local Authentication Server information. The parameters for this page are shown in the following table.

Parameter	Description
User Name	This parameter specifies the identity of the user who is seeking authentication, and is set by a string of not more than 20 printable characters.
Password	This parameter specifies the password specific to the user name, and is set by a string of not more than 20 printable characters.
Permission	This parameter represents the allowance and denial of access. The values that can be configured are: • **Allow** - When set to *Allow*, the authentication request is allowed over the set of ports in the PORT LIST. • **Deny** - When set to *Deny*, the authentication request is NOT allowed over the set of ports in the PORT LIST.
Port List	This parameter represents the complete set of ports of the authenticator to which the user is allowed or denied access. It is based on permission.

MAC Session Info


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Port Settings
Timers
Local AS
Mac Session Info
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
MAC Session Info
Supplicant MacAddr
Session Initialize
Session ReAuthenticate
Submit
Select
Supp MacAddr
Identifier
Auth SM State
Auth Session Status
PortNumber
Initialize
Reauthenticate

Clicking the MAC Session Info tab brings up the MAC Session Info page, which configures the supplicant MAC address. The parameters for this page are shown in the following table.

Parameter	Description
Session Intialize	This parameter is the initialization control for this Supplicant MAC address. Setting this attribute to *True* causes the Supplicant session with this MAC address, to be initialized. The attribute value reverts to *False* once initialization has completed.
Session ReAuthenticate	This parameter is the reauthentication control for this Supplicant MAC address. Setting this attribute to *True* causes the Authenticator PAE state machine for this MAC address to reauthenticate the Supplicant. Setting this attribute to *False* has no effect. This attribute always returns to *False* when it is read.

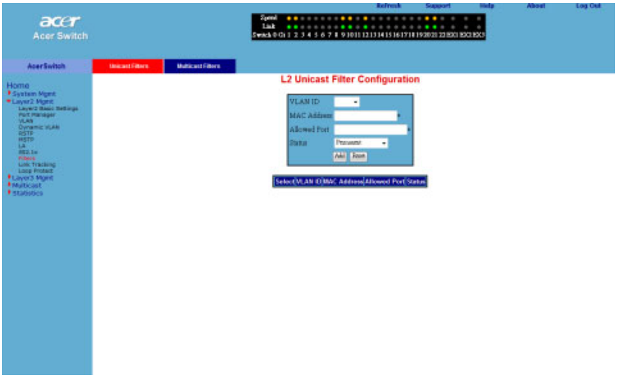
Filters

The Filters link allows you to configure Layer 2 packet filtering.

The Layer 2 packet filtering management has the following configuration pages:

- "Unicast Filters" on page 384
- "Multicast Filters" on page 385

Unicast Filters

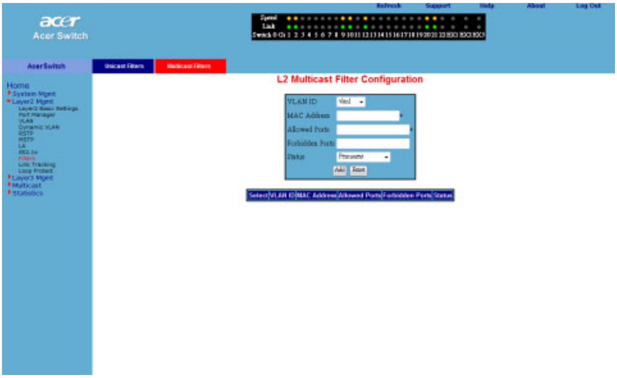

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 G1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Unicast Filters
Multicast Filters
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
L2 Unicast Filter Configuration
VLAN ID
MAC Address
Allowed Port
Status
Permanent
Add
Reset
Select
VLAN ID
MAC Address
Allowed Port
Status

Clicking the UNICAST FILTERS tab brings up the L2 UNICAST FILTER CONFIGURATION page, which sets the filter configuration to control the unicast packets that the switch needs to process. The parameters for this page are shown in the following table.

Parameter	Description
FDB ID	This parameter specifies the forwarding database ID.
MAC Address	This parameter specifies the destination MAC address of the received packet.
Receive Port	This parameter specifies the port on which the packet was received.

Parameter	Description
Allowed Ports	This parameter specifies the list of ports on which the received packet, with the above set MAC address (if received from the configured port) can be forwarded.
Status	You can choose to set this configuration to any one of the following types: • **Other** – For entries currently in use, but whose conditions remain different from the following values. • **Permanent** – Entries that reside even after the restart of the switch. • **DeleteOnReset** – This deletes the entry on restart. • **DeleteOnTimeout** – This deletes the entry on expiration of the ageing timer.

Multicast Filters


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Unicast Filters
Multicast Filters
Home
System Mgmt
Layer2 Mgmt
Layer2 Basic Settings
Port Manager
VLAN
Dynamic VLAN
RSTP
MSTP
LA
802.1x
Filters
Link Tracking
Loop Protect
Layer3 Mgmt
Multicast
Statistics
Add
Reset

L2 Multicast Filter Configuration

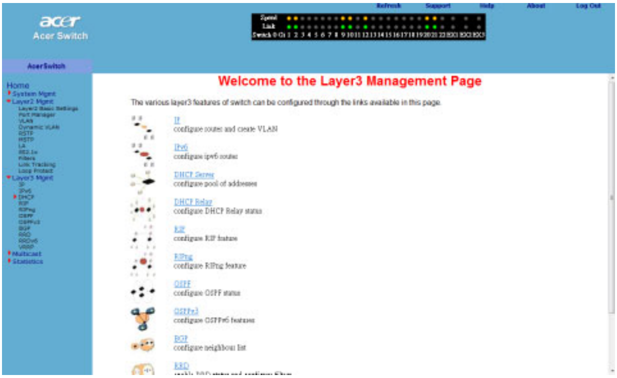
VLAN ID: Vlan1
MAC Address:
Allowed Ports:
Forbidden Ports:
Status: Permanent

Select	VLAN ID	MAC Address	Allowed Ports	Forbidden Ports	Status

Clicking the MULTICAST FILTERS tab brings up the L2 MULTICAST FILTER CONFIGURATION page, which allows you to set the filter configuration to control the multicast packets that the switch needs to process. The parameters for this page are shown in the following table.

Parameter	Description
VLAN ID	This parameter specifies the VLAN ID.
MAC Address	This parameter specifies the destination MAC address of the received packet.
Receive Port	This parameter specifies the port on which the packet was received.
Allowed Ports	This parameter specifies the list of ports on which the received packet, with the above set MAC address (if received from the configured port) can be forwarded.
Forbidden Ports	This parameter specifies the list of ports on which the received packet, with the above set MAC address (if received from the configured port) must NOT be forwarded.
Status	You can choose to set this configuration to any one of the following types: • **Permanent** – This configuration resides even after restart of the switch. • **DeleteOnReset** – This configuration deletes the entry on restart. • **DeleteOnTimeout** – This configuration deletes the entry on expiration of the ageing timer.

Layer 3 Management


Refresh
Support
Help
About
Log Out
acer
Acer Switch
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

Welcome to the Layer3 Management Page

The various layer3 features of switch can be configured through the links available in this page.

IP
configure router and create VLAN

IPv6
configure ipv6 router

DHCP Server
configure pool of addresses

DHCP Relay
configure DHCP Relay status

RIP
configure RIP feature

RIPng
configure RIPng feature

OSPF
configure OSPF status

OSPFv3
configure OSPFv6 features

BGP
configure neighbour list

RRD

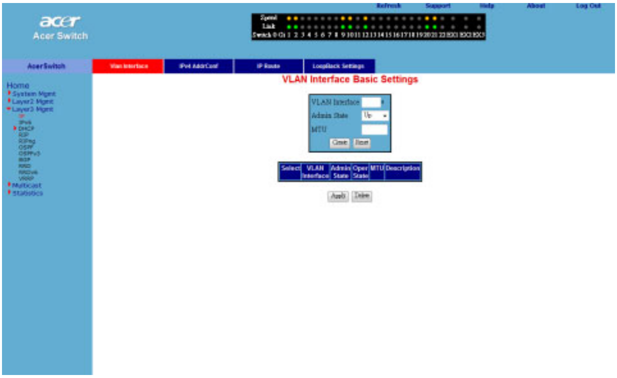
The LAYER 3 MANAGEMENT home page has links to all Layer 3 features.

IP

The IP link enables you to perform IP related configuration. This can be done through the following pages.

- “Vlan Interface” on page 388
- “IP V4 Interface Settings” on page 389
- “IP Route” on page 390
- “LoopBack Basic Settings” on page 391

Vlan Interface

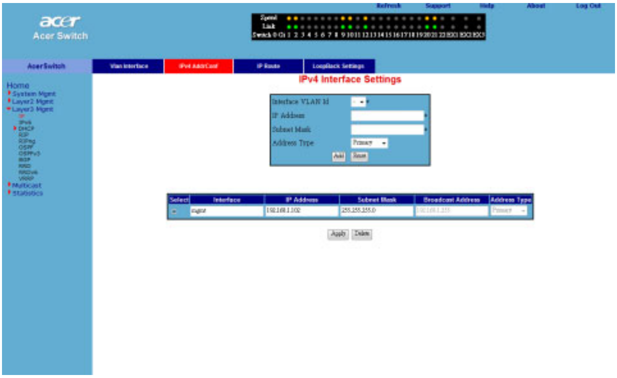

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
Vlan Interface
IPv6 AddrConf
IP Route
LoopBack Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
VLAN Interface Basic Settings
VLAN Interface
Admin State
MTU
Create
Reset
Select
VLAN Interface
Admin State
Oper State
MTU
Description
Apply
Delete

Admin State: Up

Clicking the VLAN INTERFACE tab brings up the VLAN INTERFACE BASIC SETTINGS page, which allows configuring of L3 VLAN interfaces. The parameters for this page are shown in the following table.

Parameter	Description
VLAN Interface	This parameter specifies the VLAN identifier.
Admin State	This parameter specifies the admin state as either *Up* or *Down*.
MTU	This parameter specifies the maximum transfer unit size in bytes.

IP V4 Interface Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 G1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Vlan Interface
IPv4 AddrConf
IP Route
LoopBack Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Add
Reset
Apply
Delete

IPv4 Interface Settings

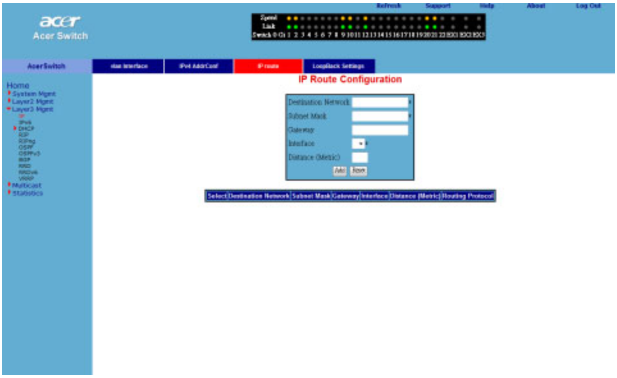
Interface VLAN Id
IP Address
Subnet Mask
Address Type: Primary

Select	Interface	IP Address	Subnet Mask	Broadcast Address	Address Type
○	mgmt	192.168.1.102	255.255.255.0	192.168.1.255	Primary

Clicking the IPv4 Addr Conf tab brings up the IPv4 Interface Settings page, which allowsyou to configure the IP address for L3 VLANs. The parameters for this page are shown in the following table.

Parameter	Description
Interface VLAN ID	This parameter specifies the VLAN interface.
IP Address	This parameter specifies the IP Address of the specified interface.
Subnet Mask	This parameter indicates the mask for the specified IP Address.
Address Type	This parameter specifies the type of address, which can be *Primary* or *Secondary*.

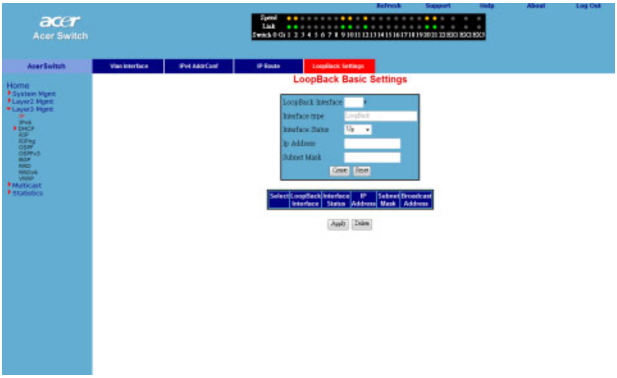
IP Route


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
vlan Interface
IPv6 AddrConf
IP route
LoopBack Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRD6
VRRP
Multicast
Statistics
IP Route Configuration
Destination Network
Subnet Mask
Gateway
Interface
Distance (Metric)
Add
Reset
Select
Destination Network
Subnet Mask
Gateway
Interface
Distance (Metric)
Routing Protocol

Clicking the IP ROUTE tab brings up the IP ROUTE CONFIGURATION page, which allows you to configure the static IP routes. The parameters for this page are shown in the following table.

Parameter	Description
Destination Network	This parameter specifies the network address for which the route is being added.
Subnet Mask	This parameter indicates the subnet mask for the Destination Network address.
Acer	This parameter denotes the Next Hop Acer to reach the IP address.
Interface	This parameter specifies the outgoing interface.
Distance (Metric)	This parameter specifies the metric value of the destination.

LoopBack Basic Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
AcerSwitch
Vlan Interface
IPv6 AddrConf
IP Route
LoopBack Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
LoopBack Basic Settings
LoopBack Interface
Interface type
LoopBack
Interface Status
Up
Ip Address
Subnet Mask
Create
Reset
Select
LoopBack Interface
Interface Status
IP Address
Subnet Mask
Broadcast Address
Apply
Delete

Clicking the LoopBack Settings tab brings up the LoopBack Basic Settings page, which allows you to configure loopback IP interfaces. The parameters for this page are shown in the following table.

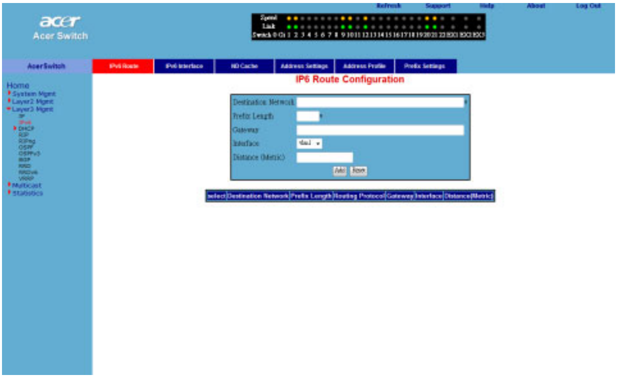
Parameter	Description
LoopBack Interface	This parameter is the name of the loopback interface getting created.
Interface Type	This parameter is always the loopback for this configuration.
Interface Status	This parameter for the Interface Status can be set to *Up* or *Down*.
IP Address	This parameter specifies the IP address for this loopback interface.
Subnet Mask	This parameter specifies the subnet mask for this loopback interface.

IP V6

The IPv6 link allows you to perform IPv6 related configurations. This can be accomplished through the following six pages.

- “IPv6 Route Configuration” on page 392
- “IPv6 Interface” on page 393
- “ND Cache” on page 395
- “Address Settings” on page 396
- “Address Profile” on page 397
- “Prefix Settings” on page 398

IPv6 Route Configuration

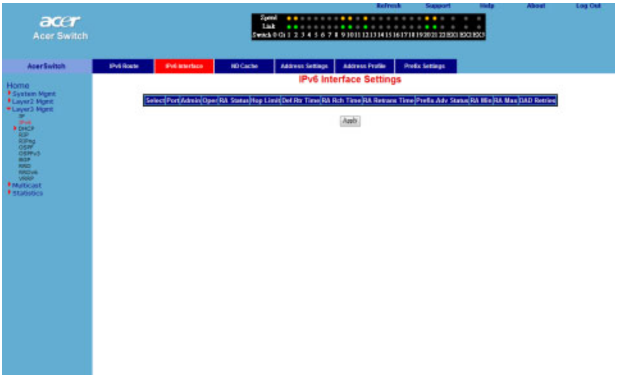

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
IPv6 Route
IPv6 Interface
ND Cache
Address Settings
Address Profile
Prefix Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
IP6 Route Configuration
Destination Network
Prefix Length
Gateway
Interface
vlan1
Distance (Metric)
Add
Reset
select
Destination Network
Prefix Length
Routing Protocol
Gateway
Interface
Distance(Metric)

Clicking the IPv6 ROUTE tab brings up the IP6 ROUTE CONFIGURATION page, which configures various IP6 Route parameters. The parameters for this page are shown in the following table.

Parameter	Description
Destination Network	This parameter specifies the network address for which the IPv6 route is being added.
Prefix Length	This parameter specifies the subnet mask for the above said address.

Parameter	Description
Routing Protocol	This parameter indicates the routing protocol through which the route was learnt, if not manual. This cannot be configured.
Acer	This parameter specifies the Next Hop Acer to reach the IP address.
Interface	This parameter indicates the outgoing interface.
Distance (Metric)	This parameter denotes metric value of the destination.

IPv6 Interface


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX0 EX1 EX3
AcerSwitch
IPv6 Route
IPv6 Interface
ND Cache
Address Settings
Address Profile
Prefix Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRD6
VRRP
Multicast
Statistics
Apply

IPv6 Interface Settings

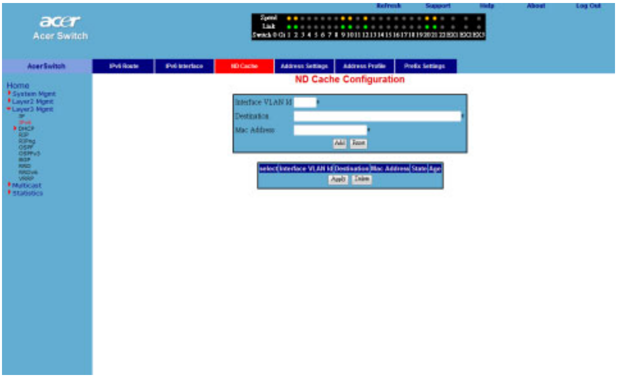
Select	Port	Admin	Oper	RA Status	Hop Limit	Def Rtr Time	RA Rch Time	RA Retrans Time	Prefix Adv Status	RA Min	RA Max	DAD Retries

Clicking the IPv6 INTERFACE tab brings up the IPv6 INTERFACE SETTINGS page, which displays the various parameters for the IPv6 Interface. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the Index of the VLAN interface.

Parameter	Description
Admin	This parameter indicates the Administrative Status of IPv6 on the Interface.
Oper	This parameter specifies the Operational Status of IPv6 on the given Interface, which is a read-only field.
RA Status	This parameter indicates the Router Advertisement status on the Interface.
Hop Limit	This parameter denotes the Hop Limit value to be placed in the Router Advertisements sent on the Interface.
Def-Rtr Time	This parameter specifies the Default router lifetime to be placed in the Router Advertisements sent on the interface.
RA Rch Time	This parameter indicates the Reachable time to be placed in the Router Advertisements sent on the interface.
RA Retrans Time	This parameter specifies the RA Retransmit time to be placed in the Router Advertisement sent on the interface.
Prefix-Adv Status	This parameter specifies the Prefix Advertisement status on the Interface.
RA Min	This parameter specifies the minimum time in seconds allowed between sending unsolicited router advertisements.
RA Max	This parameter indicates the maximum time in seconds allowed between sending unsolicited router advertisements.
DAD Retries	This parameter specifies the maximum number of Duplicate Address Detection retries.

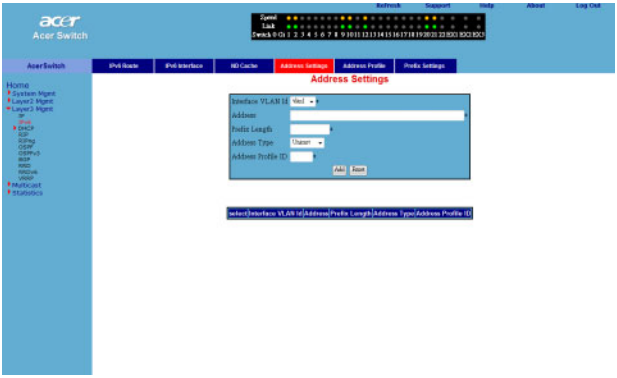
ND Cache


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
IPv6 Route
IPv6 Interface
ND Cache
Address Settings
Address Profile
Prefix Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
ND Cache Configuration
Interface VLAN Id
Destination
Mac Address
Add
Reset
select
Interface VLAN Id
Destination
Mac Address
State
Age
Apply
Delete

Clicking the ND CACHE tab brings up the ND CACHE CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Interface VLAN ID	This parameter indicates index of the VLAN interface.
Destination	This parameter specifies Destination IPv6 address.
MAC Address	This parameter denotes the physical address of the Destination address.
State	This parameter indicates the Reachability state of the entry, which is a read-only field.
Age	This parameter specifies the Age Time.

Address Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 G1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
IPv6 Route
IPv6 Interface
ND Cache
Address Settings
Address Profile
Prefix Settings
Address Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Address
Prefix Length
Address Profile ID
Add
Reset
select
Interface VLAN Id
Address
Prefix Length
Address Type
Address Profile ID

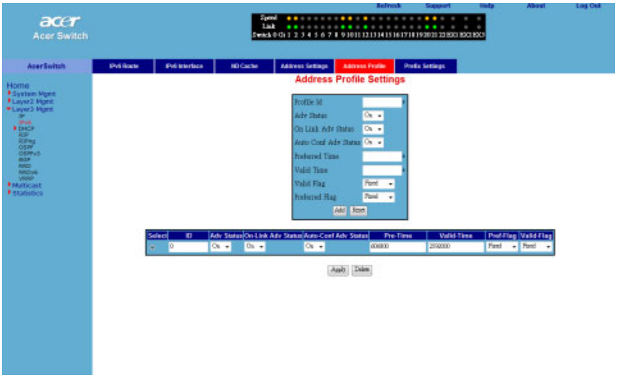
Interface VLAN Id Vlan1

Address Type Unicast

Clicking the ADDRESS SETTINGS tab brings up the ADDRESS SETTINGS page, which allows you to configure address settings for IPv6. The parameters for this page are shown in the following table.

Parameter	Description
Interface VLAN ID	This parameter specifies the index of the VLAN Interface.
Address	This parameter specifies the IPv6 address.
Prefix Length	This parameter indicates the length of the prefix (in bits) associated with this entry's IPv6 address.
Address Type	This parameter specifies that the type of address can be Link-*Local*, Global-*Unicast* or *Anycast*.
Address Profile ID	This parameter indicates the index to the IPv6 address Profile table.

Address Profile


Refresh
Support
Help
About
Log Out
Acer Switch
AcerSwitch
IPv6 Route
IPv6 Interface
ND Cache
Address Settings
Address Profile
Prefix Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Add
Reset
Apply
Delete

Address Profile Settings

Profile Id:
Adv Status: On
On Link Adv Status: On
Auto Conf Adv Status: On
Preferred Time:
Valid Time:
Valid Flag: Fixed
Preferred Flag: Fixed

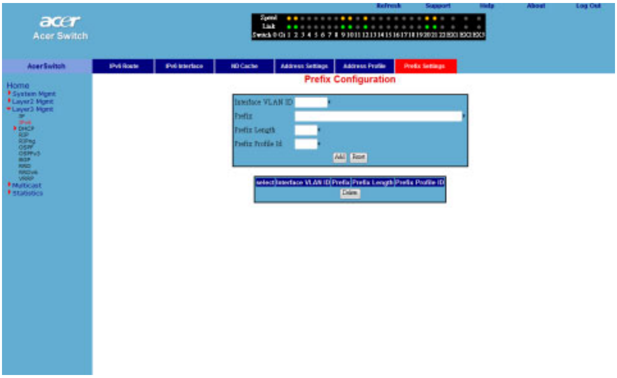
Select	ID	Adv Status	On-Link Adv Status	Auto-Conf Adv Status	Pre-Time	Valid-Time	Pref-Flag	Valid-Flag
○	0	On	On	On	604800	2592000	Fixed	Fixed

Clicking the ADDRESS PROFILE tab brings up the ADDRESS PROFILE SETTINGS page. The parameters for this page are shown in the following table.

Parameter	Description
Profile ID	This parameter specifies the index of the Address Profile entry.
Adv Status	This parameter specifies the Prefix Advertise status.
On Link Adv Status	This parameter indicates the On-Link Advertise Flag status.
Auto Conf Adv Status	This parameter denotes the Autonomous Configuration Advertise Flag status.
Preferred Time	This parameter specifies the Preferred Lifetime of the prefix address that uses this profile.
Valid Time	This parameter indicates the Valid Lifetime of the prefix address that uses this profile.

Parameter	Description
Valid Flag	This parameter specifies if the Valid Lifetime Flag is *Variable* or *Fixed*.
Preferred Flag	This parameter specifies if the Preferred Lifetime Flag is *Variable* or *Fixed*.

Prefix Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
IPv6 Route
IPv6 Interface
ND Cache
Address Settings
Address Profile
Prefix Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Prefix Configuration
Interface VLAN ID
Prefix
Prefix Length
Prefix Profile Id
Add
Reset
select
Interface VLAN ID
Prefix
Prefix Length
Prefix Profile ID
Delete

Clicking the PREFIX SETTINGS tab brings up the PREFIX CONFIGURATION page. The parameters for this page are shown in the following table.

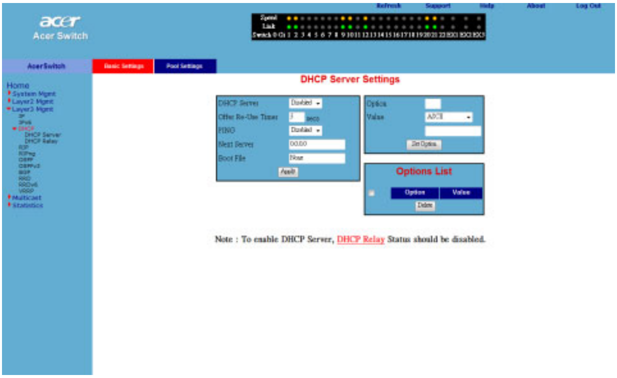
Parameter	Description
Interface VLAN ID	This parameter specifies the index of the VLAN Interface.
Prefix	This parameter indicates the IPv6 address prefix to be advertised in RA.
Prefix Length	This parameter indicates the PREFIX LENGTH (in bits).
Prefix Profile ID	This parameter specifies index to the IPv6 address profile table.

DHCP Server

The DHCP Server link helps you to manage the DHCP server in the switch through the following two pages:

- "DHCP Basic Settings" on page 399
- "Pool Settings" on page 400

DHCP Basic Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch
AcerSwitch
Basic Settings
Pool Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply
Set Option
Delete

DHCP Server Settings

DHCP Server: Disabled
Offer Re-Use Timer: 5 secs
PING: Disabled
Next Server: 0.0.0.0
Boot File: None

Option:
Value: ASCII

Options List

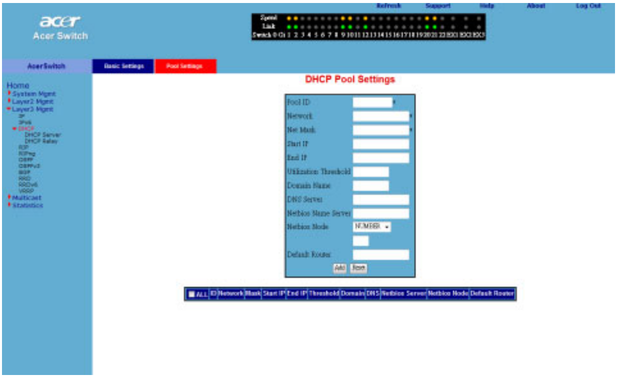
☐	Option	Value

Note : To enable DHCP Server, DHCP Relay Status should be disabled.

Clicking the DHCP SETTINGS tab brings up the DHCP BASIC SETTINGS page. The parameters for this page are shown in the following table.

Parameter	Description
DHCP-Server	With this parameter you can enable or disable the DHCP server using this configuration.
Offer-reuse Time out (seconds)	This parameter specifies the Reuse Timeout value that can be configured in this field, which is used by DHCP.
ICMP Echo	This parameter enables or disables the ICMP Echo feature.

Pool Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 XG1 XG2 XG3
AcerSwitch
Basic Settings
Pool Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
DHCP Pool Settings
Pool ID
Network
Net Mask
Start IP
End IP
Utilization Threshold
Domain Name
DNS Server
Netbios Name Server
Netbios Node
NUMBER
Default Router
Add
Reset
ALL
ID
Network
Mask
Start IP
End IP
Threshold
Domain
DNS
Netbios Server
Netbios Node
Default Router

Clicking the Pool Settins link brings up the DHCP Pool Settings page, which allows you to configure the IP address pool that can be used by the DHCP server to allocate IP addresses. The parameters for this page are shown in the following table.

Parameter	Description
Pool ID	This parameter specifies the pool ID to index among the different subnet pools configured.
Network	This parameter specifies the subnet of the IP address in the pool.
Subnet Mask	This parameter specifies the subnet mask of the IP address in the pool.
Start IP	This parameter specifies the first IP address in the address pool that is used for dynamic allocation by the DHCP server.
End IP	This parameter specifies the last IP address in the address pool that is used for dynamic allocation by the DHCP server.

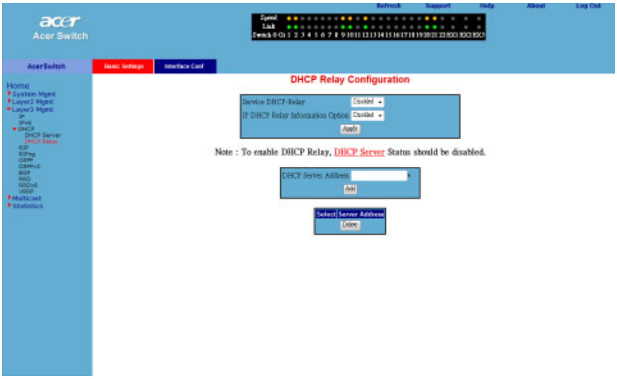
Parameter	Description
Lease Time	This parameter specifies the time interval for which the IP address is valid.
Utilization Threshold	This parameter specifies the DHCP Pool Utilization Threshold value.
Status	This parameter specifies the status of the entry.

DHCP Relay

The DHCP Relay link helps you to manage the DHCP relay in the switch through the following two pages:

- "DHCP Relay Basic Settings" on page 401
- "Interface Settings" on page 402

DHCP Relay Basic Settings


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch
AcerSwitch
Basic Settings
Interface Conf
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply
Add
Select
Server Address
Delete

DHCP Relay Configuration

Service DHCP-Relay: Disabled

IP DHCP Relay Information Option: Disabled

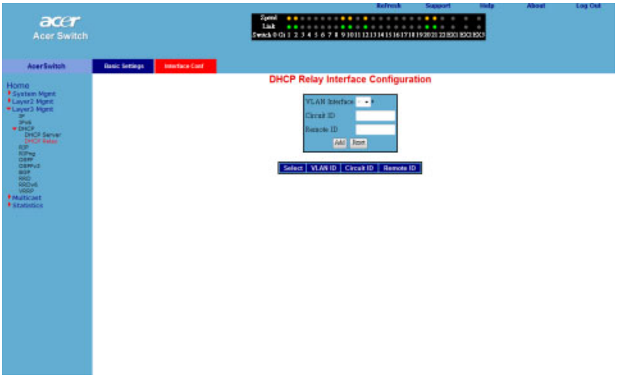
Note : To enable DHCP Relay, DHCP Server Status should be disabled.

DHCP Server Address

Clicking the BASIC SETTINGS tab brings up the DHCP RELAY CONFIGURATION page, which displays the various parameters for configuring the DHCP relay. The parameters for this page are shown in the following table.

Parameter	Description
Service DHCP-Relay	This parameter specifies the DHCP relay status that can be enabled or disabled in the switch using this field.
IP DHCP Relay Information Option	You can enable/disable this field to control the processing related to the Relay Agent Information options.
DHCP Server Address	This parameter indicates the IP address of the DHCP Server to which the Relay Agent needs to forward the packets from the client.

Interface Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Interface Conf
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
DHCP Relay Interface Configuration
VLAN Interface
Circuit ID
Remote ID
Add
Reset
Select
VLAN ID
Circuit ID
Remote ID

Clicking the Interface Conf tab brings up the DHCP Relay Interface Configuration page, which allows you to configure the DHCP relay for VLANs. The parameters for this page are shown in the following table.

Parameter	Description
VLAN Interface	This parameter specifies the VLAN Interface name.

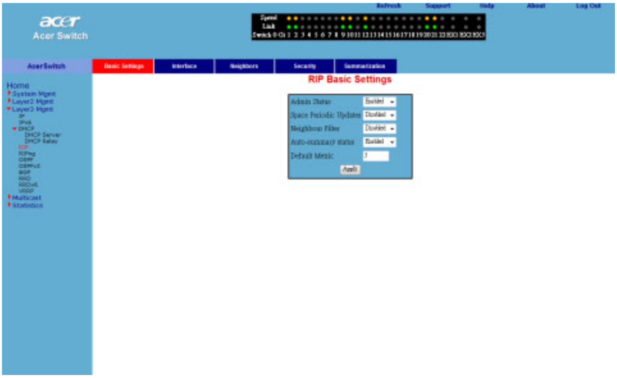
Parameter	Description
Circuit ID	This parameter specifies the DHCP Relay Circuit identifer.
Remote ID	This parameter specifies the Remote identifer.

RIP

The RIP link opens the following links for configuration of RIP protocol:

- “RIP Basic Settings” on page 403
- “Interfaces” on page 404
- “Neighbors List” on page 406
- “Security Settings” on page 407
- “Address Summarization” on page 408

RIP Basic Settings

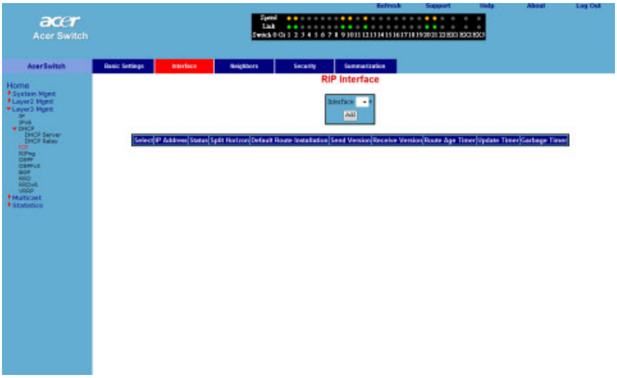

acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
Basic Settings
Interface
Neighbors
Security
Summarization
RIP Basic Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply

Admin Status: Enabled
Space Periodic Updates: Disabled
Neighbour Filter: Disabled
Auto-summary status: Enabled
Default Metric: 3

Clicking the BASIC SETTINGS tab brings up the RIP BASIC SETTINGS page. The parameters for this page are shown in the following table.

Parameter	Description
Output-delay	This parameter specifies the delay that needs to be enabled for RIP to split the periodic update packets before they are sent out.
Neighbor Filter	This parameter enables or disables neighbor filtering. Neighbor filtering helps you to filter routes from specific neighbors.
Auto-summary status	This parameter enables or disables the Auto-summary feature.

Interfaces

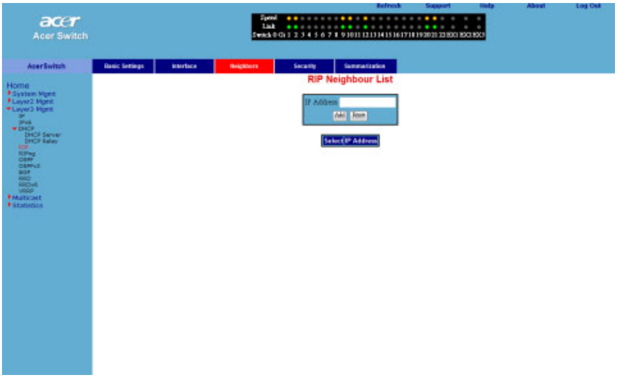

Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 RX01 RX02 RX03
AcerSwitch
Basic Settings
Interface
Neighbors
Security
Summarization
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
RIP Interface
Interface
Add
Select
IP Address
Status
Split Horizon
Default Route Installation
Send Version
Receive Version
Route Age Timer
Update Timer
Garbage Timer

Clicking the INTERFACE tab brings up the RIP INTERFACE page. The parameters for this page are shown in the following table.

Parameter	Description
Interface	This parameter specifies the Interface ID for which RIP needs to be configured.

Parameter	Description
IP Address	This parameter specifies the IP address of the RIP interface.
Status	This parameter specifies the admin status of the interface.
Split Horizon	This parameter specifies the operational status of Split Horizon in the system.
Default Route Installation	This parameter specifies whether Default Route Installation can be done or not.
Send Version	This parameter allows selecting the RIP packets sent to be compatible to either *RIPV1*, *RIP1 Compatible* or *RIPv2*.
Receive Version	This parameter is similar to SEND VERSION, but it allows you to choose the RIP packets to be received as either *RIPV1, RIPV2*, both *RIPv1 and RIPv2* or *None*.
Route Age Timer	This parameter specifies the time interval after which the routes will be flushed.
Update Timer	This parameter specifies the time interval between successive RIP updates.
Garbage Timer	This parameter specifies the time interval after which the invalid routes will be removed from the routing table.

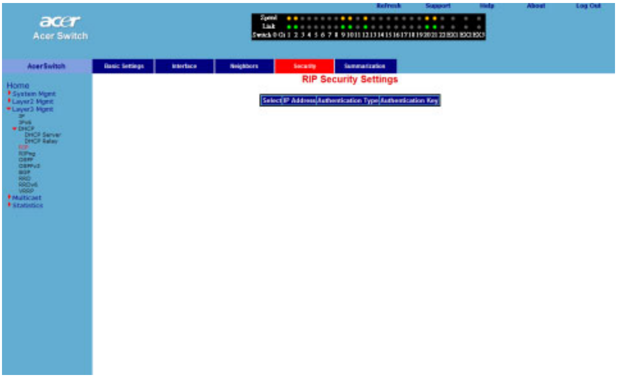
Neighbors List


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
Basic Settings
Interface
Neighbors
Security
Summarization
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
RIP Neighbour List
IP Address
Add
Select IP Address

Clicking the NEIGHBORS tab brings up the RIP NEIGHBOR LIST page, which is used to configure the RIP neighbors, by configuring their IP address.

The single parameter for this page is IP ADDRESS, which specifies the IP Address of the neighbor router to which the unicast update has to be sent.

Security Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Interface
Neighbors
Security
Summarization
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics

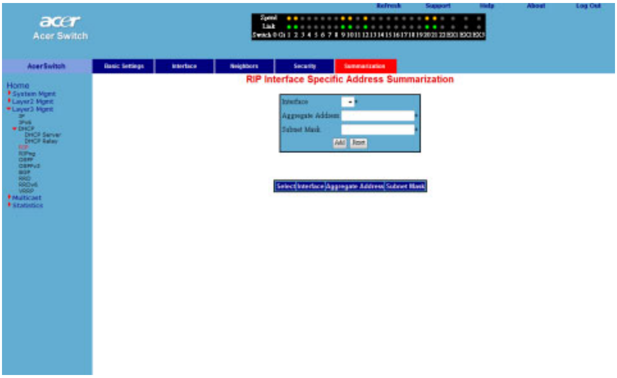
RIP Security Settings

Select	IP Address	Authentication Type	Authentication Key

Clicking the SECURITY tab brings up the RIP SECURITY SETTING page. The parameters for this page are shown in the following table.

Parameter	Description
IP Address	This parameter displays the active RIP interfaces. You can select the interface for which you want to configure authentication.
Authentication Type	This parameter specifies the authentication type. You can choose *No Authentication*, or *Simple Password*, or the *md5* authentication type.
Authentication Key	This parameter specifies the key used for authentication if the authentication type is other than *No Authentication*.

Address Summarization


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Interface
Neighbors
Security
Summarization
RIP Interface Specific Address Summarization
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Interface
Aggregate Address
Subnet Mask
Add
Reset
Select
Interface
Aggregate Address
Subnet Mask

Clicking the SUMMARIZATION tab brings up the RIP INTERFACE SPECIFIC ADDRESS SUMMARIZATION page. The parameters for this page are shown in the following table.

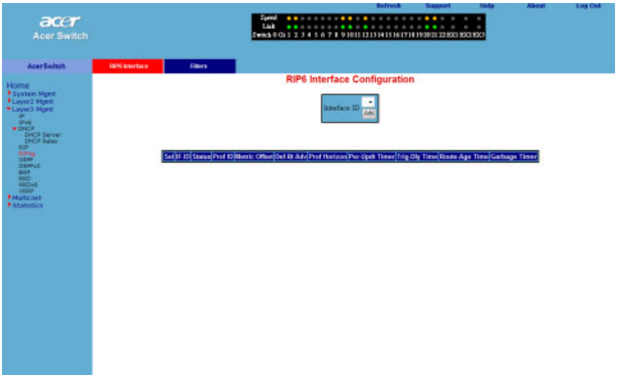
Parameter	Description
Interface	This parameter specifies the Interface ID for which the RIP aggregate address needs to be configured.
Aggregate Address	This parameter specifies the aggregate address.
Subnet Mask	This parameter specifies the mask of the aggregate address.

RIPng

The RIP6 link allows you perform RIPv6 related configuration for the switch. This can be accomplished through the following two pages:

- “RIP6 Interface” on page 409
- “Filters”

RIP6 Interface


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
RIP6 Interface
Filters
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Add

RIP6 Interface Configuration

Interface ID

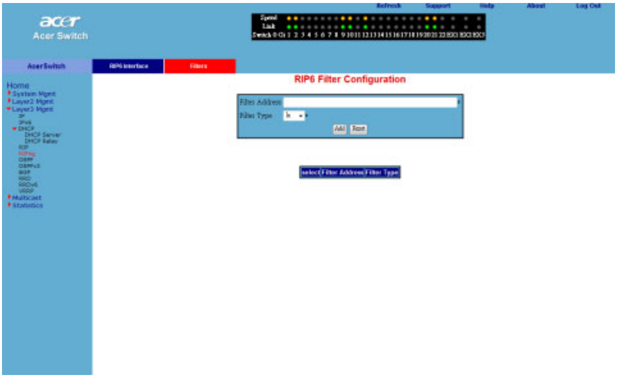
Sel	IF ID	Status	Prof ID	Metric Offset	Def Rt Adv	Prof Horizon	Per-Updt Timer	Trig-Dly Time	Route-Age Time	Garbage Timer

Clicking the RIP6 INTERFACE tab brings up the RIP6 INTERFACE CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Interface ID	Specifies the Interface Id for which RIPv6 needs to be configured.
Status	This parameter specifies the administration status of the interface.
Prof ID	This parameter indicates the Index of the Address Profile entry.
Metric Offset	This parameter specifies the metric for the routes that are being re-distributed.

Parameter	Description
Def Rt Adv	This parameter indicates the default router lifetime to be placed in the Router Advertisements sent on the interface.
Prof Horizon	This parameter specifies the operational status of Profile Horizon in the system.
Per-Updt Timer	This parameter specifies the time interval between successive RIP6 updates.
Trig-Dly Time	This parameter indicates the time interval in seconds by which further triggered updates are delayed, after one triggered update is sent.
Route Age Time	This parameter specifies the time interval after which, the routes are flushed.
Garbage Timer	This parameter specifies the time interval after which, the invalid routes are removed from the routing table.

Filters


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EXO1 EXO2 EXO3
AcerSwitch
RIP6 Interface
Filters
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
RIP6 Filter Configuration
Filter Address
Filter Type
In
Add
Reset
select
Filter Address
Filter Type

Clicking the FILTERS tab brings up the RIP6 FILTER CONFIGURATION page. The parameters for this page are shown in the following table.

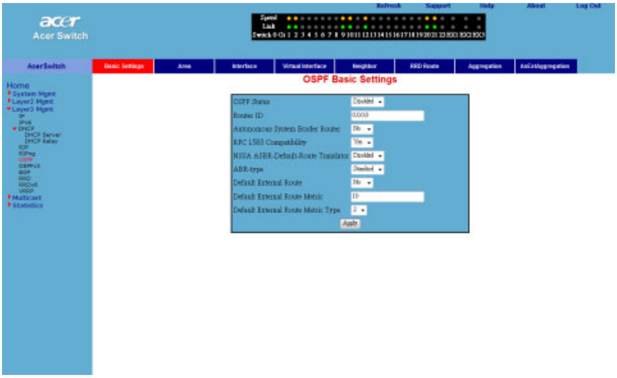
Parameter	Description
Filter Address	This parameter specifies the FILTER ADDRESS for the RIP6 interface.
Filter Type	This parameter specifies the FILTER TYPE for which RIP6 needs to be configured.

OSPF

The OSPF link allows you to configure the OSPF protocol through the following pages:

- "OSPF Basic Settings" on page 411
- "Area" on page 413
- "Interface" on page 414
- "Virtual Interface" on page 415
- "OSPF Neighbor"
- "OSPF RRD Route Configuration" on page 417
- "OSPF Area Aggregation" on page 418
- "External Aggregation" on page 419

OSPF Basic Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Area
Interface
Virtual Interface
Neighbor
RRD Route
Aggregation
AsExtAggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics

OSPF Basic Settings

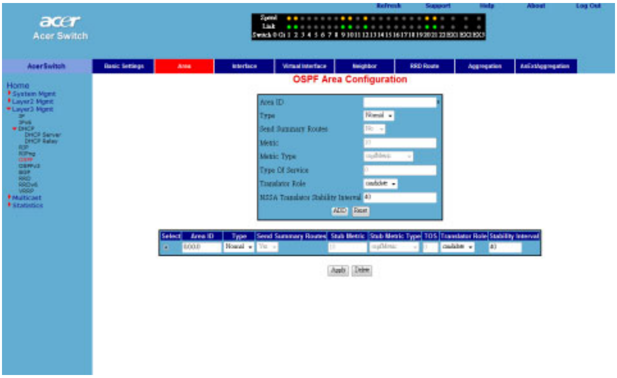
OSPF Status: Disabled
Router ID: 0.0.0.0
Autonomous System Border Router: No
RFC 1583 Compatibility: Yes
NSSA ASBR-Default-Route Translator: Disabled
ABR-type: Standard
Default External Route: No
Default External Route Metric: 10
Default External Route Metric Type: 2

Apply

Clicking the BASIC SETTINGS tab brings up the OSPF BASIC SETTINGS page. The parameters for this page are shown in .

Parameter	Description
OSPF Status	This parameter specifies the global status of the protocol in the switch.
Router ID	This parameter specifies the router identifier.
Autonomous System Border Router	This parameter indicates the flag to denote whether or not the router is to be configured as an Autonomous System Border Router.
RFC 1583 Compatibility	This parameter specifies the compatibility to RFC 1583 for choosing the route among multiple AS for the same destination.
External Link State Database Limit	This parameter specifies the maximum number of non-default AS-external-LSA entries that can be stored in the link state database.

Area


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 BXD1 BXD2 BXD3
AcerSwitch
Basic Settings
Area
Interface
Virtual Interface
Neighbor
RRD Route
Aggregation
AsExtAggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
ADD
Reset
Apply
Delete

OSPF Area Configuration

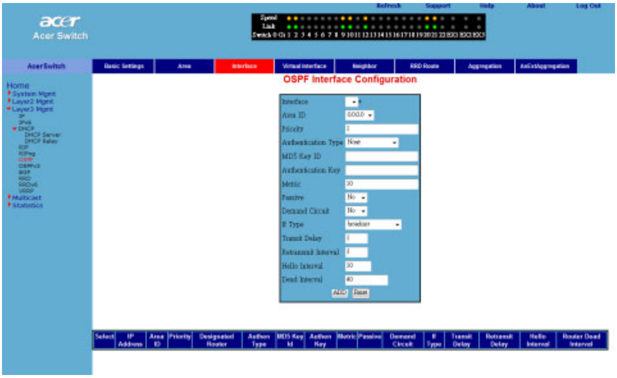
Area ID:
Type: Normal
Send Summary Routes: No
Metric: 10
Metric Type: ospfMetric
Type Of Service: 0
Translator Role: candidate
NSSA Translator Stability Interval: 40

Select	Area ID	Type	Send Summary Routes	Stub Metric	Stub Metric Type	TOS	Translator Role	Stability Interval
○	0.0.0.0	Normal	Yes	10	ospfMetric	0	candidate	40

Clicking the AREA tab brings up the OSPF AREA CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Area ID	This parameter specifies the identifier for the area.
Type	This parameter allows you to configure the area type, as a *Stub* area, a *Normal* area or *NSSA*.
Send Summary Router	This field is used to contrd the import of summary LSAs to stub areas. This does not have any impact for other areas.
Default Cost	This parameter specifies the metric/cost associated with the routes.

Interface


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 G1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Area
Interface
Virtual Interface
Neighbor
RRD Route
Aggregation
AsExtAggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
ADD
Reset

OSPF Interface Configuration

Interface	
Area ID	0.0.0.0
Priority	1
Authentication Type	None
MD5 Key ID	
Authentication Key	
Metric	10
Passive	No
Demand Circuit	No
If Type	broadcast
Transit Delay	1
Retransmit Interval	5
Hello Interval	10
Dead Interval	40

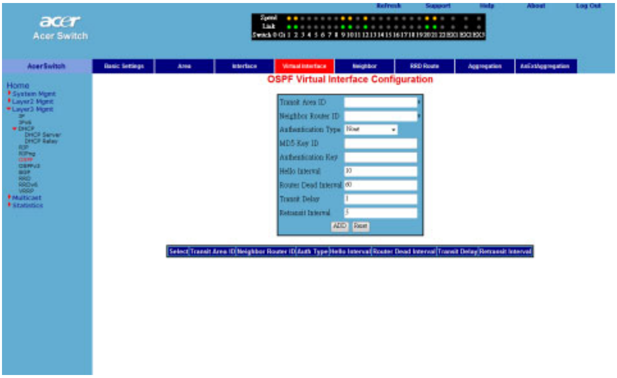
Select	IP Address	Area ID	Priority	Designated Router	Authen Type	MD5 Key Id	Authen Key	Metric	Passive	Demand Circuit	If Type	Transit Delay	Retransmit Delay	Hello Interval	Router Dead Interval

Clicking the INTERFACE tab brings up the OSPF INTERFACE CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Interface	This parameter specifies the interface index of the port.
Area ID	This parameter indicates the 32-bit integer uniquely identifying the area to which the interface connects.
Priority	This parameter specifies the priority of this interface, which is used in the DR election algorithm.
Authentication Type	This parameter allows you to choose *MD5*, *Simple Password* or *None* as the authentication type.
MD5 Key ID	This parameter specifies the secret key used to create the message digest appended to the OSPF packet, if the authentication type is *MD5*.

Parameter	Description
Authentication Key	This parameter specifies the key required for authentication, if authentication is enabled on this interface.
IP Address	This parameter specifies the IP Address of the OSPF interface.
Designated Router	This read-only field specifies the IP Address of the Designated Router.
Status	When this parameter is enabled, the interface is advertised as an internal route to some area. When disabled it denotes that the interface is external to OSPF.

Virtual Interface


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Area
Interface
Virtual Interface
Neighbor
RRD Route
Aggregation
AsExtAggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
ADD
Reset

OSPF Virtual Interface Configuration

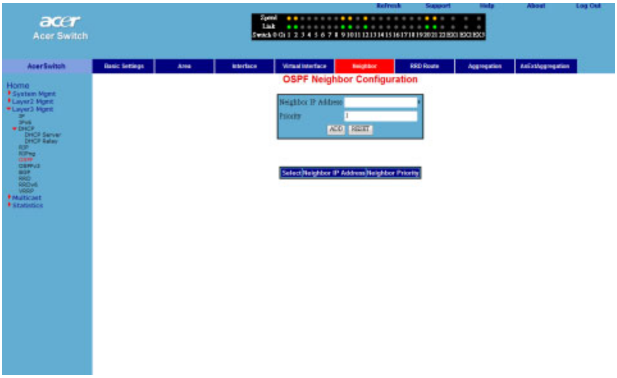
Transit Area ID
Neighbor Router ID
Authentication Type: None
MD5 Key ID
Authentication Key
Hello Interval: 10
Router Dead Interval: 60
Transit Delay: 1
Retransmit Interval: 5

Select	Transit Area ID	Neighbor Router ID	Auth Type	Hello Interval	Router Dead Interval	Transit Delay	Retransmit Interval

Clicking the VIRTUAL INTERFACE tab brings up the OSPF VIRTUAL INTERFACE CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Transit Area ID	This parameter specifies the transit area that the virtual link traverses.
Neighbor Router ID	This parameter specifies the router ID of the virtual neighbor.
Authentication Type	This parameter allows you to choose *MD5*, *Simple Password* or *None* as the authentication type.
MD5 Key ID	This parameter specifies the secret key used to create the message digest appended to the OSPF packet if the authentication type is *MD5*.
Authentication Key	This parameter specifies the key required for authentication, if authentication is enabled on this interface.

OSPF Neighbor


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Area
Interface
Virtual Interface
Neighbor
RRD Route
Aggregation
AsExtAggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
ADD
RESET
Select
Neighbor IP Address
Neighbor Priority

OSPF Neighbor Configuration

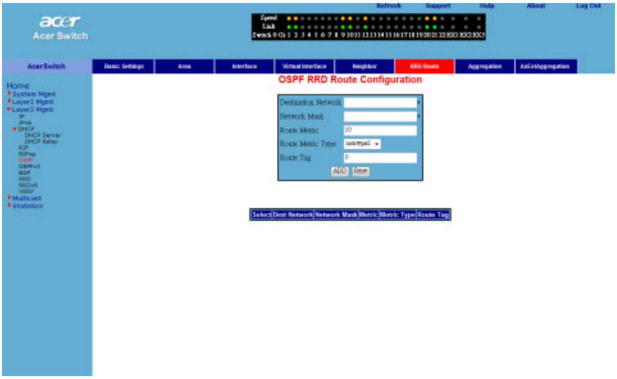
Neighbor IP Address

Priority 1

Clicking the NEIGHBOR tab brings up the OSPF NEIGHBOR CONFIGURATION page, which allows you to configure OSPF neighbors. The parameters for this page are shown in the following table.

Parameter	Description
Neighbor IP Address	This parameter specifies the neighbor router ID.
Priority	This parameter specifies a number value for the router priority.

OSPF RRD Route Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Area
Interface
Virtual Interface
Neighbor
RRD Route
Aggregation
AsExtAggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
ADD
Reset

OSPF RRD Route Configuration

Destination Network:
Network Mask:
Route Metric: 10
Route Metric Type: asexttype2
Route Tag: 0

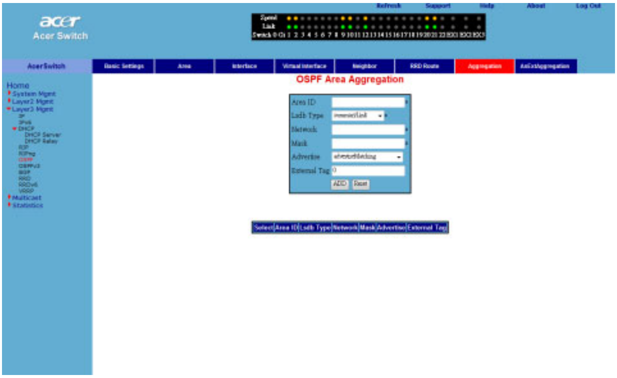
Select	Dest Network	Network Mask	Metric	Metric Type	Route Tag

Clicking the RRD ROUTE tab brings up the OSPF RRD ROUTE CONFIGURATION page, which displays the various parameters for RRD Route configuration. The parameters for this page are shown in the following table.

Parameter	Description
Destination Network	This parameter specifies the DESTINATION NETWORK.
Network Mask	This parameter specifies the NETWORK MASK.

Parameter	Description
Route Metric	This parameter specifies the ROUTE METRIC.
Route Metric Type	This parameter specifies the ROUTE METRIC TYPE.
Route Tag	This parameter specifies the ROUTE TAG.

OSPF Area Aggregation


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch
AcerSwitch
Basic Settings
Area
Interface
Virtual Interface
Neighbor
RRD Route
Aggregation
AsExtAggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
OSPF Area Aggregation
Area ID
Lsdb Type
Network
Mask
Advertise
External Tag
ADD
Reset
Select
Area ID
Lsdb Type
Network
Mask
Advertise
External Tag

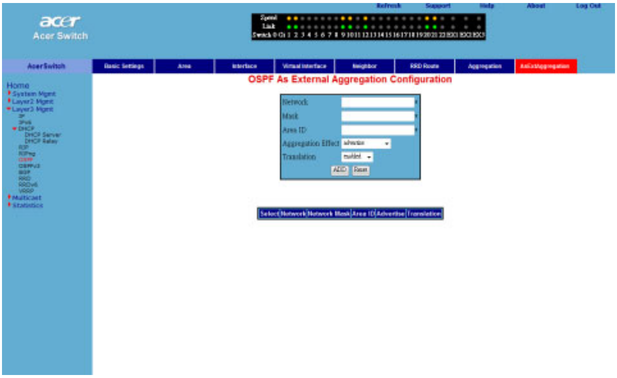
External Tag 0

Clicking the AGGREGATION tab brings up the OSPF AREA AGGREGATION page. The parameters for this page are shown in the following table.

Parameter	Description
Area ID	This parameter specifies the area associated with the OSPF address range. It is specified as an IP address.
Lsdb Type	This parameter specifies the link state data base type as a *Summary Link* or as a *NSSA External Link*.
Network	This parameter specifies the network address.
Mask	This parameter specifies the network mask.

Parameter	Description
Advertise	This parameter specifies the advertise option as *Advertise Matching* or *Do Not Advertise Matching*.
External Tag	This parameter is not used by the OSPF protocol itself. It may be used to communicate information between AS boundary routers. The precise nature of this information is outside the scope of OSPF.

External Aggregation


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Area
Interface
Virtual Interface
Neighbor
RRD Route
Aggregation
AsExtAggregation
OSPF As External Aggregation Configuration
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Network
Mask
Area ID
Aggregation Effect
Translation
ADD
Reset
Select
Network
Network Mask
Area ID
Advertise
Translation

Clicking the Ext Aggregation tab brings up the OSPF As External Aggregation Configuration page, which allows you to configure OSPF external aggregation parameters. The parameters for this page are shown in the following table.

Parameter	Description
Network	This parameter specifies the external network address.
Mask	This parameter specifies the network mask.
Area ID	This parameter specifies the Area identifier.

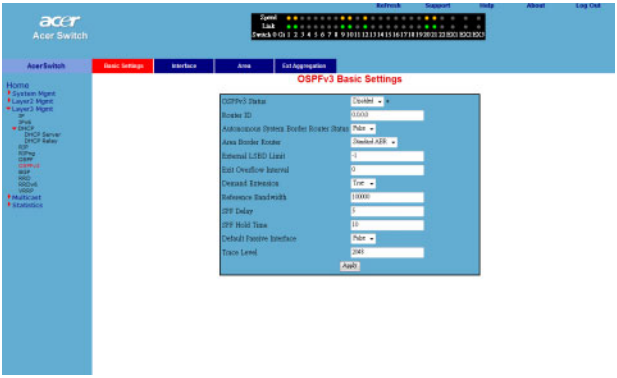
Parameter	Description
Aggregation Effect	This parameter specifies the Aggreation option as one of the following: • **Advertise** – When set to advertise and associated Area ID is 0.0.0.0, then the aggregated Type-5 are generated. Otherwise if the associated Area ID is x.x.x.x (other than 0.0.0.0), then the aggregated Type-7 is generated in NSSA x.x.x.x for the specified range. • **Do Not Advertise** – When set to doNotAdvertise (2) and associated Area ID is 0.0.0.0, then the Type-5 is not generated for the specified range, while aggregated Type-7 are generated in all attached NSSA. While if the associated Area ID is x.x.x.x (other than 0.0.0.0), then the Type-7 are not generated in NSSA x.x.x.x for the specified range. • **Allow Al**l – When set to allowAll and associated Area ID is 0.0.0.0, then the aggregated Type-5 are generated for the specified range. In addition aggregated Type-7 are generated in all attached NSSA for the specified range. • **Deny All** – When set to denyAll neither Type-5 nor Type-7 will be generated for the specified range.
Translation	This parameter enables or disables the translation.

OSPF V3

The OSPFv3 link allows you to configure the OSPFv3 protocol through the following pages:

- “OSPFv3 Basic Settings” on page 421
- “Interface” on page 423
- “Area” on page 425
- “OSPF V3 External Aggregation” on page 426

OSPFv3 Basic Settings


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EXC1 EXC2 EXC3
AcerSwitch
Basic Settings
Interface
Area
Ext Aggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply

OSPFv3 Basic Settings

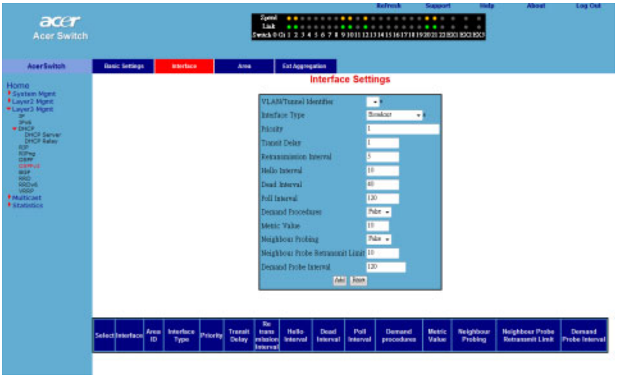
OSPFv3 Status	Disabled *
Router ID	0.0.0.0
Autonomous System Border Router Status	False
Area Border Router	Standard ABR
External LSDB Limit	-1
Exit Overflow Interval	0
Demand Extension	True
Reference Bandwidth	100000
SPF Delay	5
SPF Hold Time	10
Default Passive Interface	False
Trace Level	2048

Clicking the BASIC SETTINGS tab brings up the OSPFV3 BASIC SETTINGS page. The parameters for this page are shown in the following table.

Parameter	Description
OSPFv3 Status	This parameter enables or disables OSPFv3 administratively.
Router ID	This parameter uniquely identifies the router in the Autonomous System.
Autonomous System Border Router Status	This parameter specifies the router as Autonomous System border router.

Parameter	Description
Area Border Router	This parameter specifies the router as an area border router.
External LSDB Limit	This parameter specifies maximum number of non-default AS-external-LSAs entries that can be stored in the link-state database.
Exit Overflow Interval	This parameter specifies the time interval in seconds a router will attempt to leave OverflowState.
Demand Extension	This parameter indicates the router's support for demand routing.
Reference Bandwidth	This parameter specifies Reference bandwidth in kilobits/seconds, for calculating default interface metrics.
SPF Delay	This parameter indicates the delay in routing calculation after a topology change.
SPF Hold Time	This parameter specifies the minimum time between two consecutive SPF calculations.
Default Passive Interface	This parameter specifies whether all the OSPFv3 interfaces created after this setting are passive or not.
Trace Level	This parameter defines the level of trace required for OSPFv3.

Interface


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
Basic Settings
Interface
Area
Ext Aggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Interface Settings
Add
Reset
Select
Interface
Area ID
Interface Type
Priority
Transit Delay
Re trans mission Interval
Hello Interval
Dead Interval
Poll Interval
Demand procedures
Metric Value
Neighbour Probing
Neighbour Probe Retransmit Limit
Demand Probe Interval

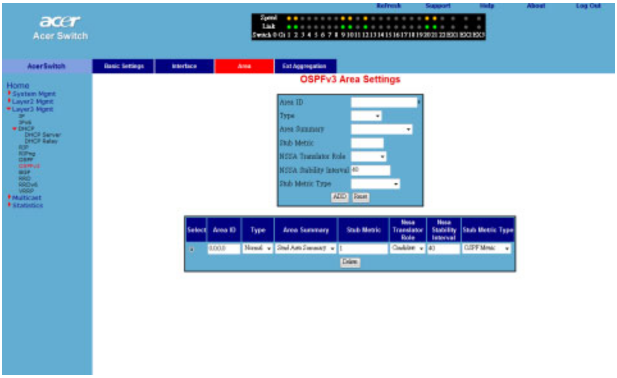
VLAN/Tunnel Identifier	
Interface Type	Broadcast
Priority	1
Transit Delay	1
Retransmission Interval	5
Hello Interval	10
Dead Interval	40
Poll Interval	120
Demand Procedures	False
Metric Value	10
Neighbour Probing	False
Neighbour Probe Retransmit Limit	10
Demand Probe Interval	120

Clicking the INTERFACE tab brings up the INTERFACE SETTINGS page. The parameters for this page are shown in the following table.

Parameter	Description
VLAN/Tunnel Identifier	This parameter specifies the IPv6 interface over which OSPFv3 is enabled.
Area ID	This parameter specifies the area ID associated with the IPv6 interface.
Interface Type	This parameter specifies the type of OSPFv3 interface (broadcast, nbma, pointToPoint and pointToMultipoint).
Priority	This parameter specifies the priority of the interface.
Transit Delay	This parameter indicates the estimated number of seconds to transmit a link state update packet over the interface.

Parameter	Description
Retransmission Interval	This parameter indicates the number of seconds between the link-state advertisement retransmissions, for adjacencies belonging to the interface.
Hello Interval	This parameter indicates the length of time, in seconds, between the Hello packets that the router sends on the interface.
Dead Interval	This parameter specifies the number of seconds for which the router waits for hello packet from the neighbor before declaring this neighbor down.
Poll Interval	This parameter denotes the larger time interval, in seconds, between the Hello packets sent to an inactive non-broadcast multi- access neighbor.
Demand Procedures	This parameter indicates whether Demand OSPFv3 procedures must be performed on this interface.
Metric Value	This parameter specifies the metric assigned to this interface.
Neighbour Probing	This parameter enables or disables neighbor probing to determine whether the neighbor is active or inactive.
Neighbour Probe Retransmit Limit	This parameter indicates the number of consecutive LSA retransmissions before the neighbor is deemed inactive and the neighbor adjacency is brought down.
Demand Probe Interval	This parameter defines how often the neighbor is probed.

Area


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 RX01 RX02 RX03
AcerSwitch
Basic Settings
Interface
Area
Ext Aggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
OSPFv3 Area Settings
Area ID
Type
Area Summary
Stub Metric
NSSA Translator Role
NSSA Stability Interval
Stub Metric Type
ADD
Reset
Delete

NSSA Stability Interval 40

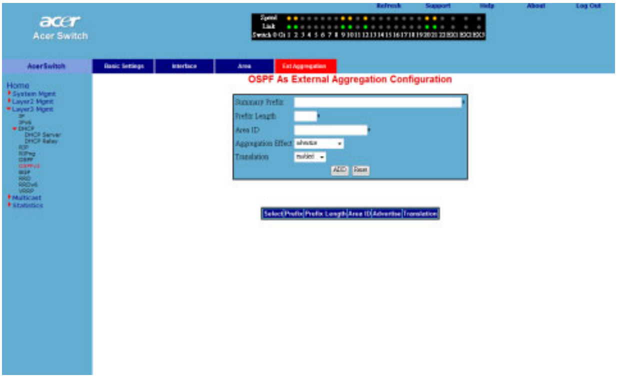
Select	Area ID	Type	Area Summary	Stub Metric	Nssa Translator Role	Nssa Stability Interval	Stub Metric Type
○	0.0.0.0	Normal	Send Area Summary	1	Candidate	40	OSPF Metric

Clicking the AREA tab brings up the OSPFV3 AREA SETTINGS page. The parameters for this page are shown in the following table.

Parameter	Description
Area ID	This parameter uniquely identifies an area.
Type	This parameter indicates whether an area is a *Stub* area, *NSSA*, or *Standard* (normal) area.
Area Summary	This parameter controls the import of Inter-Area LSAs into stub areas. This can be *noAreaSummary* or *sendAreaSummary*.
Stub Metric	This parameter indicates the metric value advertised for the default route into *Stub* area and *NSSA*.
NSSA Translator Role	This parameter specifies the NSSA Border router's ability to perform NSSA translation of type-7 LSAs into type-5 LSAs.

Parameter	Description
NSSA Stability Interval	This parameter specifies the number of seconds after an elected translator determines its services are no longer required, in which it must continue to perform its translation duties.
Stub Metric Type	This parameter specifies the type of metric (*OSPFv3 Metric, External Type 1, External Type 2*) advertised as a default route.

OSPF V3 External Aggregation


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EXC1 EXC2 EXC3
AcerSwitch
Basic Settings
Interface
Area
Ext Aggregation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
ADD
Reset

OSPF As External Aggregation Configuration

Summary Prefix
Prefix Length
Area ID
Aggregation Effect: advertise
Translation: enabled

Select	Prefix	Prefix Length	Area ID	Advertise	Translation

Clicking the Ext Aggregation tab brings up the OSPF AS External Aggregation Configuration page, which allows you to configure OSPF external aggregation parameters. The parameters for this page are shown in the following table.

Parameter	Description
Network	This parameter specifies the external network address.
Mask	This parameter specifies the network mask.

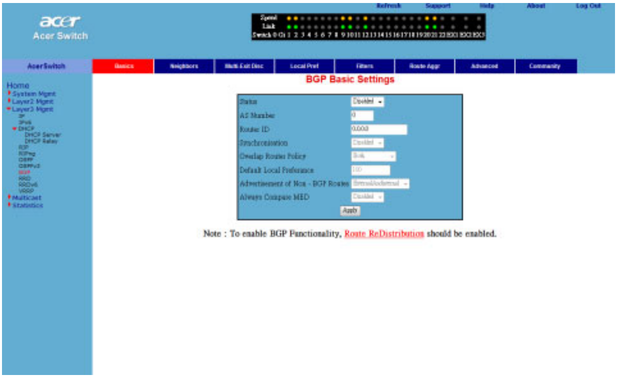
Parameter	Description
Area ID	This parameter specifies the Area identifier.
Aggregation Effect	This parameter specifies the Aggreation option as one of the following: • Advertise – When set to *advertise* and the associated Area ID is 0.0.0.0, then aggregated Type-5 are generated. Otherwise if associated Area ID is x.x.x.x (other than 0.0.0.0), then aggregated Type-7 is generated in NSSA x.x.x.x for the specified range. • Do Not Advertise – When set to *doNotAdvertise (2)* and the associated Area ID is 0.0.0.0, then Type-5 is not generated for the specified range, while aggregated Type-7 are generated in all attached NSSA. While associated Area ID is x.x.x.x (other than 0.0.0.0), then Type-7 are not generated in NSSA x.x.x.x for the specified range. • Allow All – When set to *allowAll* and associated Area ID is 0.0.0.0, then aggregated Type-5 are generated for the specified range. In addition aggregated Type-7 are generated in all attached NSSA, for the specified range. • Deny All – When set to *denyAll* neither Type-5 nor Type-7 will be generated for the specified range.
Translation	This parameter enables or disables the translation.

BGP

The BGP link allows you to configure the BGP protocol. Following are the configuration parameters available to manage BGP through this interface:

- “BGP Basic Settings” on page 428
- “BGP Peer Configuration” on page 430
- “BGP MED Configuration” on page 431
- “Local Preference” on page 432
- “BGP Filter” on page 434
- “Route Aggregations” on page 435
- “Advanced BGP Configuration” on page 436
- “BGP Community Management” on page 438

BGP Basic Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basics
Neighbors
Multi Exit Disc
Local Pref
Filters
Route Aggr
Advanced
Community
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply

BGP Basic Settings

Status	Disabled
AS Number	0
Router ID	0.0.0.0
Synchronization	Disabled
Overlap Router Policy	Both
Default Local Preference	100
Advertisement of Non - BGP Routes	External/Internal
Always Compare MED	Disabled

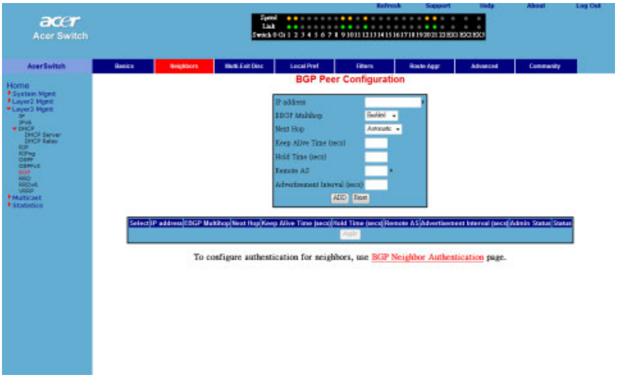
Note : To enable BGP Functionality, Route ReDistribution should be enabled.

Clicking the Basics tab brings up the BGP Basic Settings page. The parameters for this page are shown in the following table.

Parameter	Description
Status	This parameter specifies the BGP admin status. Using this, the protocol can be enabled/disabled in the switch.

Parameter	Description
AS Number	This parameter specifies the autonomous system to which the switch is connected, which is a read-only field.
Synchronization	The synchronization between IGP and BGP can be ensured by enabling this field.
Overlap Router Policy	This parameter represents the policy for handling overlapping routes. When an overlapping route is received, depending upon the configured policy, either the less-specific routes or most-specific routes or both are installed in the RIB tree.
Default Local Preference	This parameter sets a preference value for the autonomous system path.
Advertisement of Non-BGP Routes	You can choose to advertise even the external non-BGP routes by enabling this feature.
Always Compare MED	By enabling this feature, you can choose to always compare the MED values of paths from different neighbors for the same prefix, for choosing the best path.

BGP Peer Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 XG1 XG2 XG3
AcerSwitch
Basics
Neighbors
Multi Exit Disc
Local Pref
Filters
Route Aggr
Advanced
Community
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
BGP Peer Configuration
IP address
EBGP Multihop
Next Hop
Keep Alive Time (secs)
Hold Time (secs)
Remote AS
Advertisement Interval (secs)
ADD
Reset
Select
IP address
EBGP Multihop
Next Hop
Keep Alive Time (secs)
Hold Time (secs)
Remote AS
Advertisement Interval (secs)
Admin Status
Status
Apply

EBGP Multihop: Enabled

Next Hop: Automatic

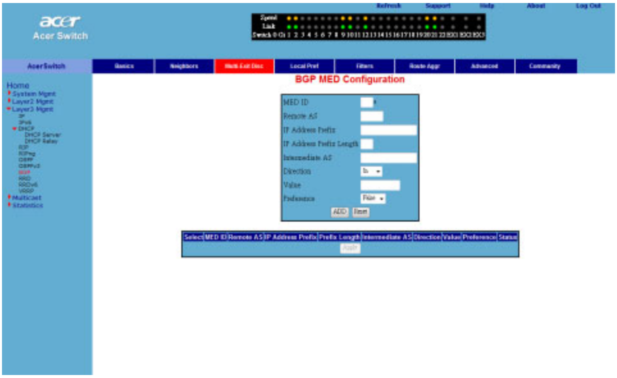
To configure authentication for neighbors, use BGP Neighbor Authentication page.

Clicking the NEIGHBORS tab brings up the BGP PEER CONFIGURATION page, which allows you to configire BGP Neighbors. The parameters for this page are shown in the following table.

Parameter	Description
IP Address	This parameter specifies the IP address of the BGP neighbor.
EBGP MultiHop	By enabling this feature, BGP connections can be established between peers, which are not directly connected.
Next Hop	Using this parameter, next Hop can be set as *Self* or *Automatic*. By setting this field to *Self*, you can make the switch the next hop for all the routes that it distributes to its peers.
Keep Alive Time (Seconds)	This parameter specifies the maximum time interval between successive updates between any two BGP peers.

Parameter	Description
Hold Time (Seconds)	This parameter specifies the Hold time. This isthe timer interval that a BGP will wait, before it decides that a connection to the peer is torn down.
Remote AS	This parameter represents the remote autonomous system number.
Advertisement Interval (seconds)	This parameter specifies the interval in seconds for the Minimum Route advertisement interval timer.
Status	This parameter specifies the status of the entry.

BGP MED Configuration

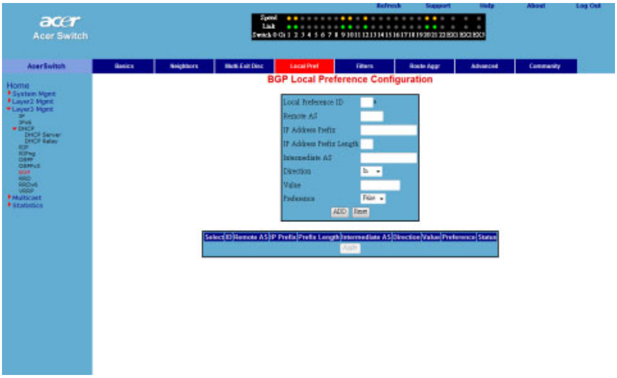

acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
Basics
Neighbors
Multi Exit Disc
Local Pref
Filters
Route Aggr
Advanced
Community
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
DHCP
DHCP Server
DHCP Relay
Multicast
Statistics
BGP MED Configuration
MED ID
Remote AS
IP Address Prefix
IP Address Prefix Length
Intermediate AS
Direction
Value
Preference
ADD
Reset
Select
MED ID
Remote AS
IP Address Prefix
Prefix Length
Intermediate AS
Direction
Value
Preference
Status
Apply

Clicking the MULTI-EXIT DISC tab brings up the BGP MED CONFIGURATION page, which allows you to configure the MED value for routes learnt from BGP peers. The parameters for this page are shown in the following table.

Parameter	Description
MED ID	This parameter specifies the index for this table.

Parameter	Description
Remote AS	This parameter specifies the AS number from whichthe route update is received.
IP Address Prefix	This parameter specifies the IP address prefix for which the update is received.
IP Address Prefix Length	This parameter is used to calculate the subnet.
Intermediate AS	This parameter represents the intermediate AS between the BGP peers.
Direction	This parameter can be set for the incoming or the outgoing packets using *In* and *Out* values.
Value	This parameter specifies the MED value to be associated with this path learnt.
Preference	This parameter is used to enable/disable filtering.
Status	This parameter indicates the status of the entry.

Local Preference


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basics
Neighbors
Multi Exit Disc
Local Pref
Filters
Route Aggr
Advanced
Community
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
ADD
Reset
Apply

BGP Local Preference Configuration

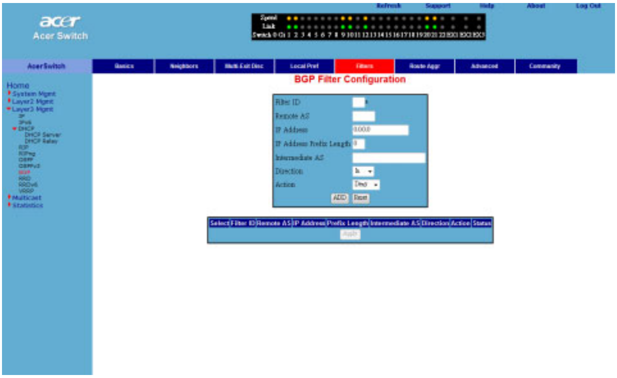
Local Preference ID *
Remote AS
IP Address Prefix
IP Address Prefix Length
Intermediate AS
Direction In
Value
Preference False

Select	ID	Remote AS	IP Prefix	Prefix Length	Intermediate AS	Direction	Value	Preference	Status

Clicking the LOCAL PREF tab brings up the BGP LOCAL PREFERENCE CONFIGURATION page, which allows you to configure the Local Preference value for routes. The parameters for this page are shown in the following table.

Parameter	Description
Local Preference ID	This parameter specifies the Local Preference ID, which is the index for this table.
Remote AS	This parameter specifies the AS number from which the route update is received.
IP Address Prefix	This parameter specifies the IP Address prefix for which the update is received.
IP Address Prefix Length	This parameter is used to calculate the subnet.
Intermediate AS	This parameter represents the intermediate AS between the BGP peers.
Direction	This parameter can be set for the incoming or the outgoing packets using *In* and *Out* values.
Value	This parameter specifies the Local preference value to be associated with this learnt path.
Preference	This parameter is used to enable/disable filtering.
Status	This parameter specifies the status of the entry.

BGP Filter


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basics
Neighbors
Multi Exit Disc
Local Pref
Filters
Route Aggr
Advanced
Community
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
BGP Filter Configuration
ADD
Reset
Select
Filter ID
Remote AS
IP Address
Prefix Length
Intermediate AS
Direction
Action
Status
Apply

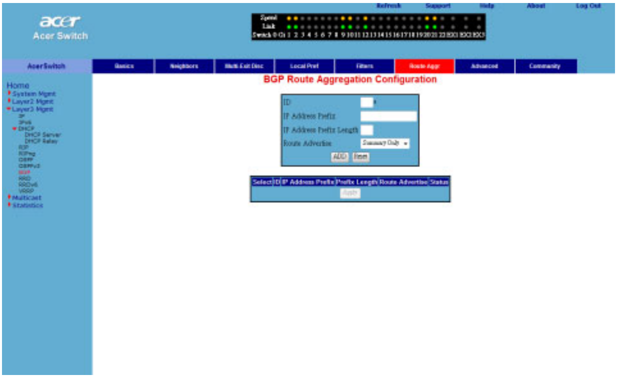
Filter ID
Remote AS
IP Address 0.0.0.0
IP Address Prefix Length 0
Intermediate AS
Direction In
Action Deny

Clicking the FILTERS tab brings up the BGP FILTER CONFIGURATION page, which is used to set the filters on the routes being learnt. The parameters for this page are shown in the following table.

Parameter	Description
Filter ID	This parameter specifies the filter index.
Remote AS	This parameter specifies the remote AS associated with the BGP peer from which the router is being distributed.
IP Address	This parameter specifies the IP address for which the route is being learnt.
IP Address Prefix Length	This parameter specifies the prefix length to calculate the Subnet.
Intermediate AS	This parameter represents the intermediate AS between the BGP peers.
Direction	This parameter indicates the direction of the packet.

Parameter	Description
Action	With this parameter you can choose either to *Allow* (not to filter) or *Deny* (Filter) for the above configuration set.
Status	This parameter specifies the status of the entry.

Route Aggregations


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
Basics
Neighbors
Multi Exit Disc
Local Pref
Filters
Route Aggr
Advanced
Community
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
BGP Route Aggregation Configuration
ID
IP Address Prefix
IP Address Prefix Length
Route Advertise
ADD
Reset
Select
ID
IP Address Prefix
Prefix Length
Route Advertise
Status
Apply

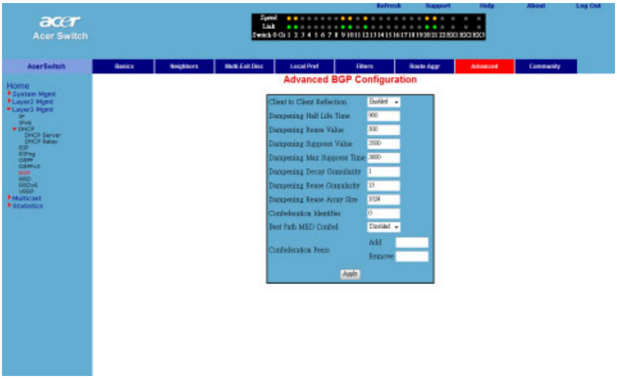
Route Advertise: Summary Only

Clicking the Route Aggr tab brings up the BGP Route Aggregation Configuration page, which is used to aggregate and configure the routes advertised by BGP. The parameters for this page are shown in the following table.

Parameter	Description
ID	This parameter specifies the index to this table.
IP Address Prefix	This parameter specifies the IP address prefix that needs to be aggregated.

Parameter	Description
IP Address Prefix Length	This parameter, in combination with the IP Prefix, decides the aggregated route to be distributed by this switch.
Route Advertise	With this parameter you can either choose to advertise only the aggregated routes by setting *Summary only,* or choose to advertise all routes by setting *All.*
Status	This parameter specifies the status of the entry.

Advanced BGP Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
Basics
Neighbors
Multi Exit Disc
Local Pref
Filters
Route Aggr
Advanced
Community
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Add
Remove
Apply

Advanced BGP Configuration

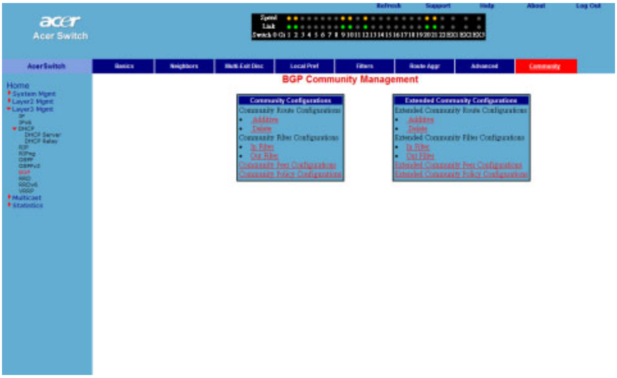
Client to Client Reflection	Enabled
Dampening Half Life Time	900
Dampening Reuse Value	500
Dampening Suppress Value	3500
Dampening Max Suppress Time	3600
Dampening Decay Granularity	1
Dampening Reuse Granularity	15
Dampening Reuse Array Size	1024
Confederation Identifier	0
Best Path MED Confed	Disabled
Confederation Peers	

Clicking the ADVANCED tab brings up the ADVANCED BGP CONFIGURATION page, which configures dampening and confederation parameters. The parameters for this page are shown in the following table.

Parameter	Description
Client to Client Reflection	This parameter configures the Route Reflector to support route reflection to client peers. By default, the Route Reflector will reflect routes learnt from a client peer to all other client peers. If required, the administrator can disable this feature by disabling client-to-client reflection. If disabled, then the Route Reflector will not advertise routes learnt from a client peer to other client peers. This occurs when all peers within a cluster are fully-meshed and the client peer itself is able to advertise routes to other clients of the route-reflector.
Dampening Half Life Time	This parameter specifies the time (in seconds) after which a penalty is decreased by half. Once a route has been assigned a penalty, the penalty is decreased by half after the half-life time.
Dampening Reuse Value	If the penalty associated with a suppressed route falls below this value, the route is re-used.
Dampening Suppress Value	A route is suppressed when the penalty associated with the route exceeds this value.
Dampening Max Suppress Time	This parameter specifies the maximum time (in seconds) a route can be suppressed.
Dampening Decay Granularity	This parameter specifies the time granularity in seconds used to perform all decay computations.
Dampening Reuse Granularity	This parameter specifies the time interval between evaluations of the reuse-lists. Each reuse lists corresponds to an additional time increment.
Dampening Reuse Array Size	This parameter specifies the size of the reuse index arrays. This size determines the accuracy with which suppressed routes can be placed within the set of reuse lists, when suppressed for a long time.
Confederation Identifier	This parameter specifies the BGP confederation identifier. The possible values are between *1* to *65535*. Configuring **0** removes the existing configuration.

Parameter	Description
Best Path MED Confed	This parameter enables or disables MED comparison among paths learnt from confed peers.
Confederation Peers	This parameter configures the ASs that belongs to the confederation.

BGP Community Management


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basics
Neighbors
Multi Exit Disc
Local Pref
Filters
Route Aggr
Advanced
Community
BGP Community Management
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
DHCP
DHCP Server
DHCP Relay
RIP
OSPF
BGP
Multicast
Statistics
Community Configurations
Community Route Configurations
Addition
Delete
Community Filter Configurations
In Filter
Out Filter
Community Peer Configurations
Community Policy Configurations
Extended Community Configurations
Extended Community Route Configurations
Addition
Delete
Extended Community Filter Configurations
In Filter
Out Filter
Extended Community Peer Configurations
Extended Community Policy Configurations

Clicking the COMMUNITY tab brings up the BGP COMMUNITY MANAGEMENT page, which configures BGP community and extended community parameters. The parameters for this page are shown in the following table.

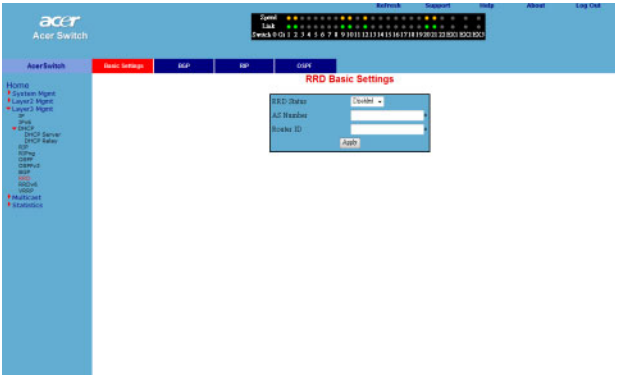
RRD

Parameter	Description
Community Route Configurations	This parameter configures an entry in the Additive or Delete Community table.
Community Filter Configurations	This parameter configures the permit or deny function for the community attribute while receiving or advertising.
Community Peer Configurations	This parameter enables or disables advertisement of community attributes to the peer.
Community Policy Configurations	This parameter configures the community attribute advertisement policy for a specific destination.
Extended Community Route Configurations	This parameter configures an entry in the Additive or Delete Extended Community table.
Extended Community Filter Configurations	This parameter configures the permit or deny function for the Extended Community attribute while receiving or advertising.
Extended Community Peer Configurations	This parameter enables or disables advertisement of the Extended Community attributes to the peer.
Extended Community Policy Configurations	This parameter configures the Extended Community attribute advertisement policy for the specific destination.

The RRD link allows you to manage the Route Redistribution with the help of the following pages:

- “RRD Basic Settings” on page 440
- “BGP” on page 441
- “RIP” on page 442
- “OSPF” on page 443

RRD Basic Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
Basic Settings
BGP
RIP
OSPF
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
RRD Basic Settings
Apply

RRD Status: Disabled

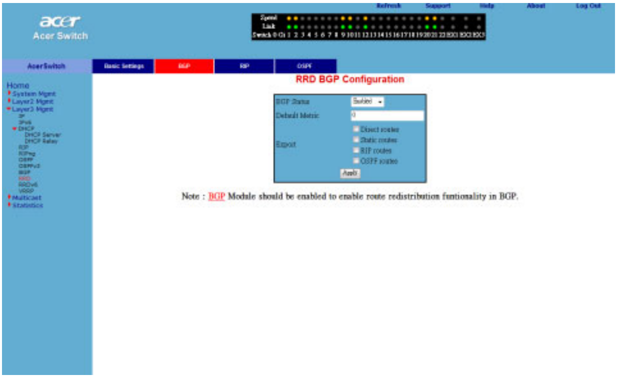
AS Number

Router ID

Clicking the Basic Settings tab brings up the RRD Basic Settings page. The parameters for this page are shown in the following table.

Parameter	Description
RRD Status	By enabling this parameter, Route Re-distribution can be enabled in the switch.
AS Number	This parameter is used to configure the Router AS number to which this switch belongs.
Router ID	This parameter represents the Router ID of the switch.

BGP


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
BGP
RIP
OSPF
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply

RRD BGP Configuration

BGP Status: Enabled

Default Metric: 0

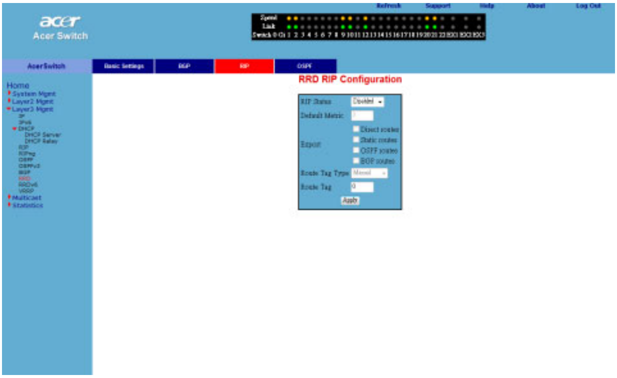
Export:
☐ Direct routes
☐ Static routes
☐ RIP routes
☐ OSPF routes

Note : BGP Module should be enabled to enable route redistribution funtionality in BGP.

Clicking the BGP tab brings up the RRD BGP CONFIGURATION page, which allows you to re-distribute the routes that are learnt through other routing protocols to BGP. The parameters for this page are shown in the following table.

Parameter	Description
BGP Status	This parameter enables or disables redistribution for BGP.
Default Metric	This parameter specifies the metric for the routes that are being re-distributed.
Import	With this parameter you can choose to import *Direct routes*, *Static routes*, *RIP routes* and/or *OSPF routes* to BGP.

RIP


Refresh
Support
Help
About
Log Out
acer
Acer Switch
AcerSwitch
Basic Settings
BGP
RIP
OSPF
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

RRD RIP Configuration

RIP Status: Disabled

Default Metric:

Export: ☐ Direct routes ☐ Static routes ☐ OSPF routes ☐ BGP routes

Route Tag Type: Manual

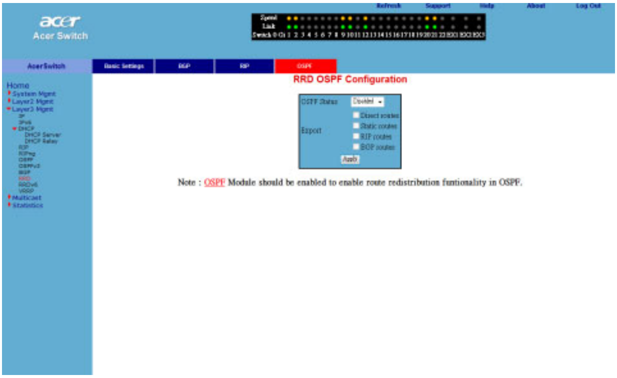
Route Tag: 0

Apply

Clicking the RIP tab brings up the RRD RIP CONFIGURATION page, which allows you to re-distribute the routes that are learnt through other routing protocols to RIP. The parameters for this page are shown in the following table.

Parameter	Description
RIP Status	This parameter enables or disables redistribution for RIP.
Default Metric	This parameter specifies the metric for the routes that are being re-distributed.
Import	You can use this parameter to choose to import *Direct routes, Static routes, OSPF routes* and *BGP routes* to RIP.
Route Tag Type	This parameter describes whether a tag is *manually* configured or *automatically* generated.
Route Tag	This parameter indicates the route tag in case you configure a manual option for the tag type.

OSPF


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 BX1 BX2 BX3
AcerSwitch
Basic Settings
BGP
RIP
OSPF
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply

RRD OSPF Configuration

OSPF Status: Disabled

Export:
☐ Direct routes
☐ Static routes
☐ RIP routes
☐ BGP routes

Note : OSPF Module should be enabled to enable route redistribution funtionality in OSPF.

Clicking the OSPF tab brings up the RRD OSPF CONFIGURATION page, which allows you to e-distribute the routes that are learnt through other routing protocols to OSPF. The parameters for this page are shown in the following table.

Parameter	Description
OSPF Status	This parameter enables or disables redistribution for OSPF.
Import	With this parameter you can choose to import *Direct routes, Static routes, RIP routes* and *BGP routes* to OSPF.

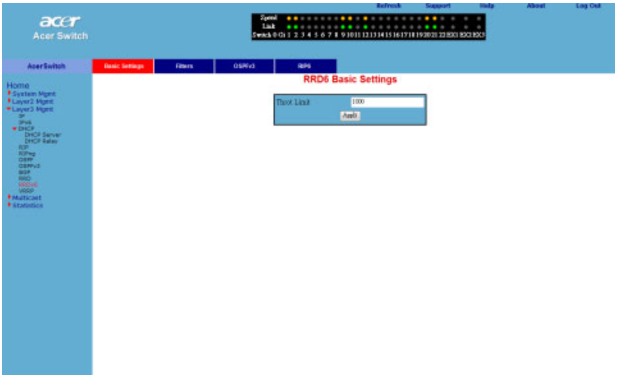
RRD6

The RRD6 link allows you to perform RRD6 related configuration through the following pages.

- “RRD6 Basic Settings” on page 444
- “Filters” on page 445

- “RRD V6 OSPF” on page 446
- “RRD RIP” on page 447

RRD6 Basic Settings

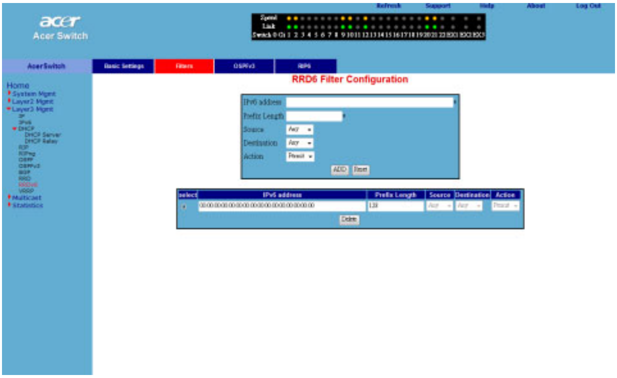

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 G1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Filters
OSPFv3
RIP6
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply

RRD6 Basic Settings

Throt Limit 1000

Clicking the BASIC SETTINGS tab brings up the RRD6 BASIC SETTINGS page, which has the single parameter option of changing the throat limit for RRD6.

Filters


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Filters
OSPFv3
RIP6
RRD6 Filter Configuration
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
ADD
Reset
Delete

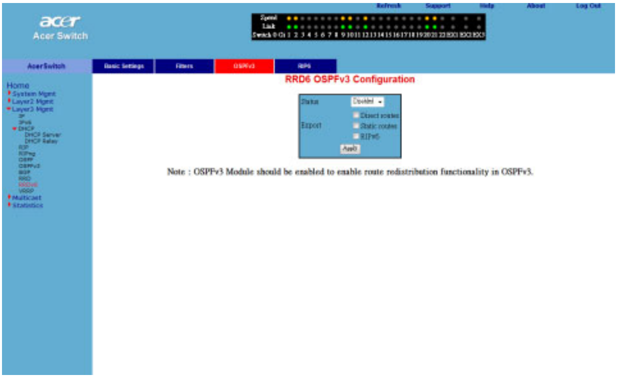
IPv6 address
Prefix Length
Source: Any
Destination: Any
Action: Permit

select	IPv6 address	Prefix Length	Source	Destination	Action
○		128	Any	Any	Permit

Clicking the FILTERS tab brings up the RRD6 FILTER CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
IPv6 address	This parameter specifies the IPv6 Address.
Prefix Length	This parameter indicates the length of the prefix (in bits) associated with this entry's IPv6 address.
Source	This parameter denotes the address of the Source.
Destination	This parameter specifies the address of the Destination.
Action	With this parameter you can either choose to *Permit* (not to filter) or *Deny* (Filter) for the above configuration set.

RRD V6 OSPF


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 BX01 BX02 BX03
AcerSwitch
Basic Settings
Filters
OSPFv3
RIP6
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply

RRD6 OSPFv3 Configuration

Status: Disabled

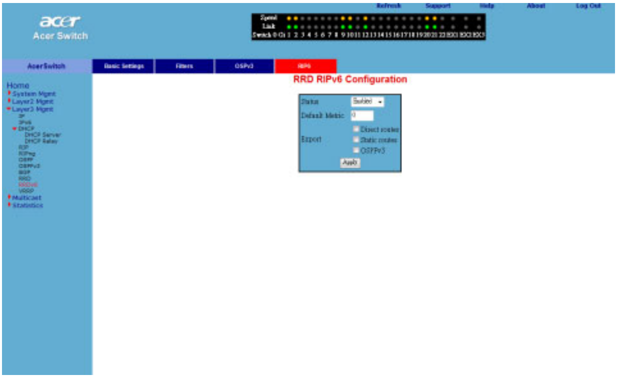
Export: ☐ Direct routes ☐ Static routes ☐ RIPv6

Note : OSPFv3 Module should be enabled to enable route redistribution functionality in OSPFv3.

Clicking the OSPFv3 tab brings up the RRD6 OSPFv3 CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Status	This parameter enables or disables redistribution for OSPFv3.
Import	With this parameter you can choose to import *Direct routes*, *Static routes* or *RIPv6 routes*.

RRD RIP


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Filters
OSPv3
RIP6
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
IP
IPv6
DHCP
DHCP Server
DHCP Relay
RIP
RIPng
OSPF
OSPFv3
BGP
RRD
RRDv6
VRRP
Multicast
Statistics
Apply

RRD RIPv6 Configuration

Status: Enabled

Default Metric: 0

Export:
☐ Direct routes
☐ Static routes
☐ OSPFv3

Clicking the RP6 tab brings up the RRD RIPv6 CONFIGURATION page. The parameters for this page are shown in the following table.

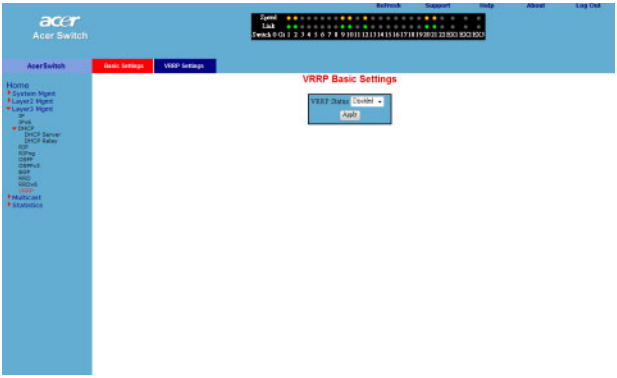
Parameter	Description
Status	This parameter enables or disables redistribution for RIP6.
Default Metric	This parameter specifies the metric for the routes that are being re-distributed.
Import	With this parameter you can choose to import *Direct routes, Static routes* or *OSPFv3 routes*.

VRRP

The VRRP link allows you to configure VRRP through the following two pages:

- “VRRP Basic Settings” on page 448
- “VRRP Settings” on page 448

VRRP Basic Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
Basic Settings
VRRP Settings

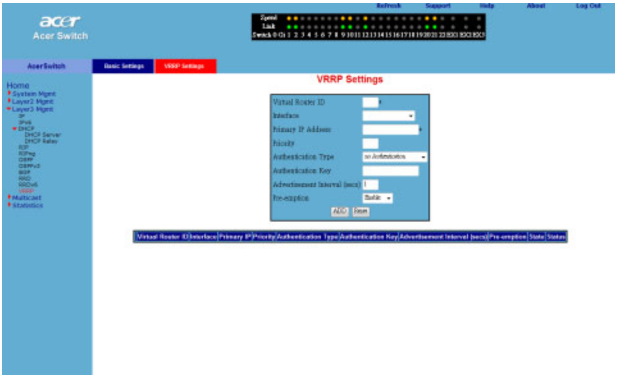
VRRP Basic Settings

VRRP Status: Disabled

Apply

Clicking the Basic Settings tab brings up the VRRP Basic Settings page, whose single parameter allows you to specify the status of VRRP in the switch.

VRRP Settings


acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
Basic Settings
VRRP Settings

VRRP Settings

Virtual Router ID
Interface
Primary IP Address
Priority
Authentication Type: no Authentication
Authentication Key
Advertisement Interval (secs): 1
Pre-emption: Enable

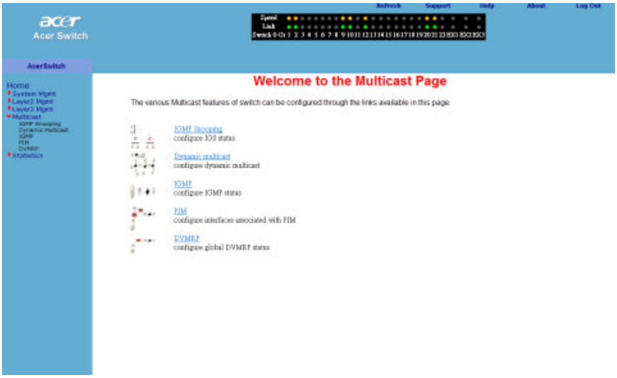
ADD
Reset

Virtual Router ID	Interface	Primary IP	Priority	Authentication Type	Authentication Key	Advertisement Interval (secs)	Pre-emption	State	Status

Clicking the VRRP SETTINGS link brings up the VRRP SETTINGS page. The parameters for this page are shown in the following table.

Parameter	Description
Virtual Router ID	This parameter indicates the Virtual ID associated with each Virtual Router.
Interface	This parameter represents the interface on which the Virtual Router must be configured.
Primary IP Address	This parameter specifies the PRIMARY IP ADDRESS for the Virtual Router.
Priority	This parameter indicates the PRIORITY for the Virtual Router. The configurable priority value ranges from *1* to *254*.
Authentication Type	This parameter indicates the AUTHENTICATION TYPE for the Virtual Router.
Authentication Key	This parameter indicates the AUTHENTICATION KEY for the Virtual Router.
Advertisement Interval (Seconds)	This parameter specifies the time Interval in seconds for sending the advertisement packets.
Preempt Mode	This parameter enablesor disables the PREEMPT MODE.
State	This parameter indicates the current state of the Virtual Router.
Status	This parameter specifies the Admin Status of the Virtual Router.

Multicast


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 RX0 RX1 RX3
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics

Welcome to the Multicast Page

The various Multicast features of switch can be configured through the links available in this page.

IGMP Snooping
configure IGS status

Dynamic multicast
configure dynamic multicast

IGMP
configure IGMP status

PIM
configure interfaces associated with PIM

DVMRP
configure global DVMRP status

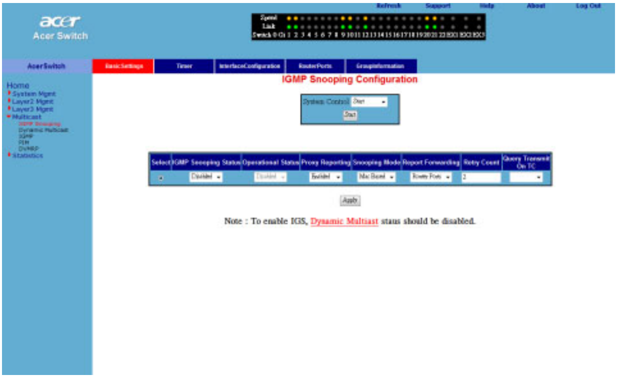
MULTICAST HOME page has links to multicast features in the switch.

GMP Snooping

The GMP Snooping link allows you to configure GMP Snooping through the following pages:

- "IGMP Snooping Configuration" on page 451
- "IGMP Snooping Timer" on page 453
- "IGMP Snooping Interface" on page 454
- "IGMP Snooping VLAN Router" on page 455
- "IGMP MAC Forwarding" on page 456

IGMP Snooping Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX0 EX2 EX3
AcerSwitch
BasicSettings
Timer
InterfaceConfiguration
RouterPorts
GroupInformation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Start
Apply

IGMP Snooping Configuration

System Control: Start

Select	IGMP Snooping Status	Operational Status	Proxy Reporting	Snooping Mode	Report Forwarding	Retry Count	Query Transmit On TC
○	Disabled	Disabled	Enabled	Mac Based	Router Ports	2	

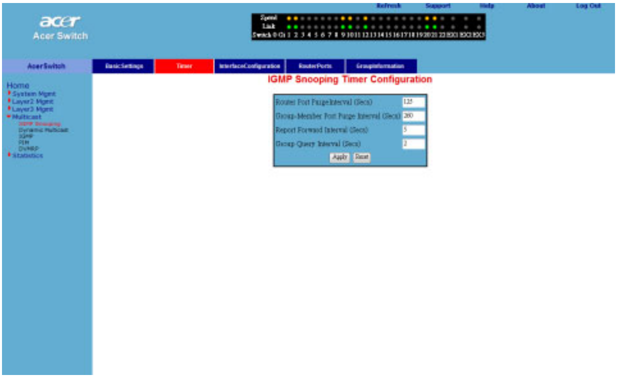
Note : To enable IGS, Dynamic Multiast staus should be disabled.

Clicking the Basic Settings tab brings up the IGMP Snooping Configuration page, which allows you to configure IGMP snooping parameters. The parameters for this page are shown in the following table.

Parameter	Description
System Control	This parameter *Starts* or *Shutsdown* IGS in the switch.
IGMP Snooping Status	This parameter enables or disables IGMP snooping globally in the switch. To enable IGS, GMRP status must be *Disabled*.

Parameter	Description
Operational Status	This parameter enables or disables IGMP snooping operationally in the switch. To enable IGS, GMRP status must be *Disabled*.
Proxy Reporting	This parameter indicates whether the proxy reporting in the IGMP snooping switch is to be enabled or disabled.
Snooping Mode	This parameter specifies the IGMP snooping multicast forwarding mode, which can be configured using the Destination IP Address or the Destination MAC Address.
Report Forwarding	This parameter specifies whether the IGMP reports are forwarded on all ports or only on router ports.
Retry Count	This parameter specifies the maximum number of group specific queries sent on a port on the reception of an IGMPv2 leave message.
Query Transmit On TC	This parameter allows you to enable or disable query transmit when topology changes.

IGMP Snooping Timer


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 HX1 HX2 HX3
AcerSwitch
BasicSettings
Timer
InterfaceConfiguration
RouterPorts
GroupInformation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Apply
Reset

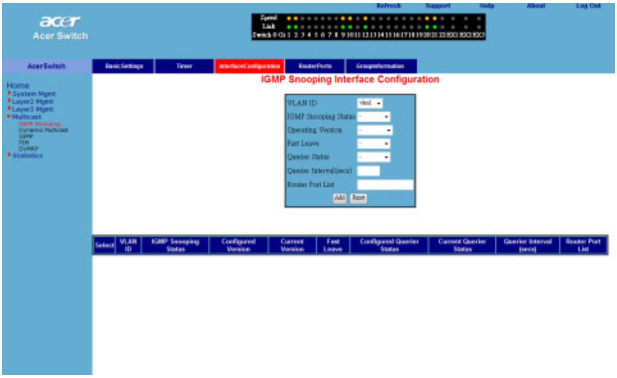
IGMP Snooping Timer Configuration

Router Port PurgeInterval (Secs)	125
Group-Member Port Purge Interval (Secs)	260
Report Forward Interval (Secs)	5
Group-Query Interval (Secs)	2

Clicking the TIMER tab brings up the IGMP SNOOPING TIMER CONFIGURATION page, which configures IGMP snooping timers. The parameters for this page are shown in the following table.

Parameter	Description
Router Port PurgeInterval (Secs)	This parameter specifies the interval for which the learnt router port will be purged. The default value is **125-seconds**.
Group-Member Port Purge Interval (Secs)	This parameter specifies the interval after which a port gets deleted, if IGMP reports are not received on a port. The default value is **260-seconds**.
Report Forward Interval (Secs)	This parameter specifies the interval within which the next report messages for the same multicast group will not be forwarded. The default value is **5-seconds**.
Group Query Interval (Secs)	This parameter specifies the interval within which the switch sends a group specific query on a port when an IGMPv2 leave message is received. The default value is **2-seconds**.

IGMP Snooping Interface


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
BasicSettings
Timer
InterfaceConfiguration
RouterPorts
GroupInformation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
IGMP Snooping Interface Configuration
VLAN ID
IGMP Snooping Status
Operating Version
Fast Leave
Querier Status
Querier Interval(secs)
Router Port List
Add
Reset

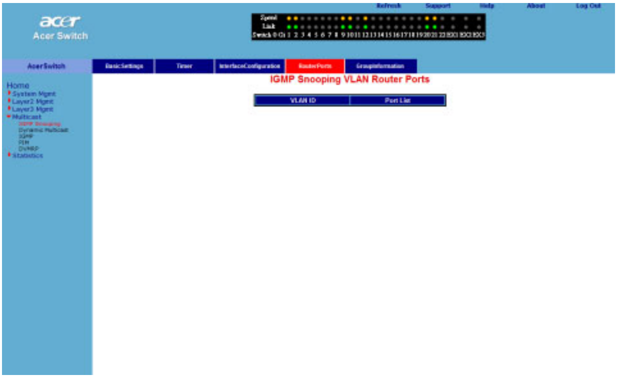
Select	VLAN ID	IGMP Snooping Status	Configured Version	Current Version	Fast Leave	Configured Querier Status	Current Querier Status	Querier Interval (secs)	Router Port List

Clicking the INTERFACE CONFIGURATION tab brings up the IGMP SNOOPING INTERFACE CONFIGURATION page, which configures IGMP snooping interface specific parameters. The parameters for this page are shown in the following table.

Parameter	Description
VLAN ID	This parameter specifies the VLAN ID for which the configuration is to be performed.
IGMP Snooping Status	This parameter specifies the status of IGMP snooping in the Switch, which can be enabled or disabled for a specific VLAN.
Operating Version	This parameter specifies the operating version of the IGMP snooping switch for a specific VLAN.
Fast Leave	This parameter indicates whether the fast leave processing for a specific VLAN, is to be enabled or disabled.

Parameter	Description
Querier Status	This parameter specifies whether the IGMP snooping switch is enabled or disabled as a querier for a specific VLAN.
Querier Interval(secs)	This parameter specifies the time period for which general queries are sent by the IGMP snooping switch, when configured as querier on a VLAN.
Router Port List	This parameter specifies the router port list for a specific VLAN.
Current Version	This parameter specifies the working IGMP Version on the given VLAN.
Current Querier Status	This parameter specifies the current status of the Querier.

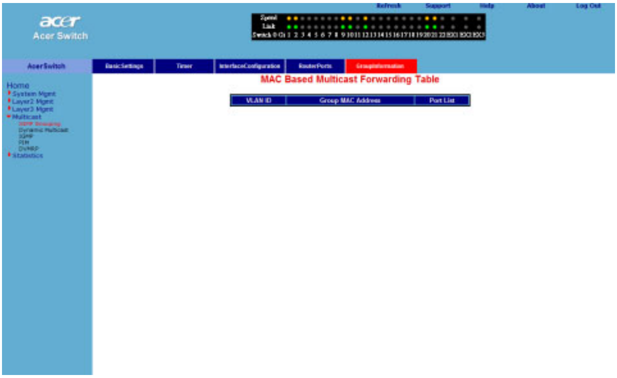
IGMP Snooping VLAN Router


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
BasicSettings
Timer
InterfaceConfiguration
RouterPorts
GroupInformation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
IGMP Snooping VLAN Router Ports
VLAN ID
Port List

Clicking the ROUTE PORTS tab brings up the IGMP SNOOPING VLAN ROUTER PORTS page. The parameters for this page are shown in the following table.

Parameter	Description
VLAN ID	This parameter specifies the VLAN ID.
Port List	This parameter specifies the ports on which routers are connected for a specific VLAN.

IGMP MAC Forwarding


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
BasicSettings
Timer
InterfaceConfiguration
RouterPorts
GroupInformation
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics

MAC Based Multicast Forwarding Table

VLAN ID	Group MAC Address	Port List

Clicking the GROUP INFORMATION tab brings up the MAC BASED MULTICAST FORWARDING TABLE page, which displays either the IP Based or the MAC Based Multicast Forwarding Table depending upon the configuration of the forwarding mode. The parameters for this page are shown in the following table.

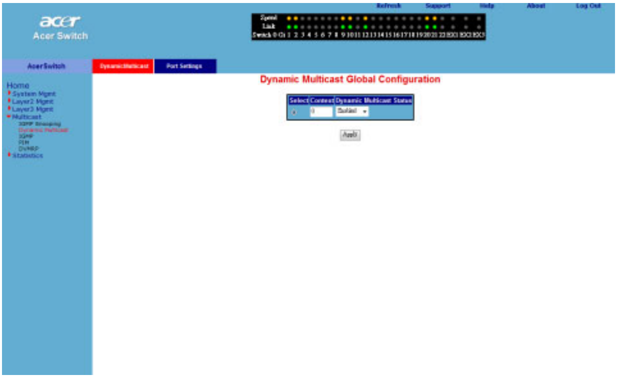
Parameter	Description
VLAN ID	This parameter specifies the VLAN ID pertaining to the MAC based multicast forwarding entry.
Group MAC Address	This parameter specifies the Group MAC Multicast address that is learnt.
Port List	This parameter specifies the learnt ports.

Dynamic Multicast

The Dynamic Multicast link allows you to configure Dynamic Multicast through the following pages:

- “Global Configuration” on page 457
- “Dynamic Multicast Port Configuration” on page 458

Global Configuration

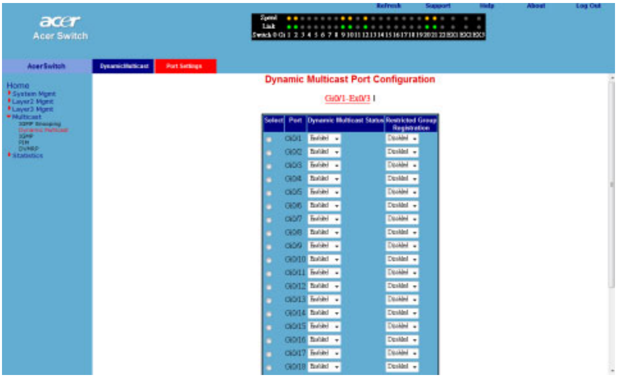

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 G1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
DynamicMulticast
Port Settings
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Apply

Dynamic Multicast Global Configuration

Select	Context	Dynamic Multicast Status
○	0	Enabled

Clicking the DYNAMIC MULTICAST tab brings up the DYNAMIC MULTICAST GLOBAL CONFIGURATION page, which allows you to enable or disable the dynamic multicast feature.

Dynamic Multicast Port Configuration


acer
Acer Switch
Refresh
Support
Help
About
Log Out
AcerSwitch
DynamicMulticast
Port Settings
Home
Dynamic Multicast Port Configuration
Select
Port
Dynamic Multicast Status
Restricted Group Registration

Clicking the PORT SETTINGS tab brings up the DYNAMIC MULTICAST PORT CONFIGURATION page, which configures dynamic multicast at the port level. The parameters for this page are shown in the following table.

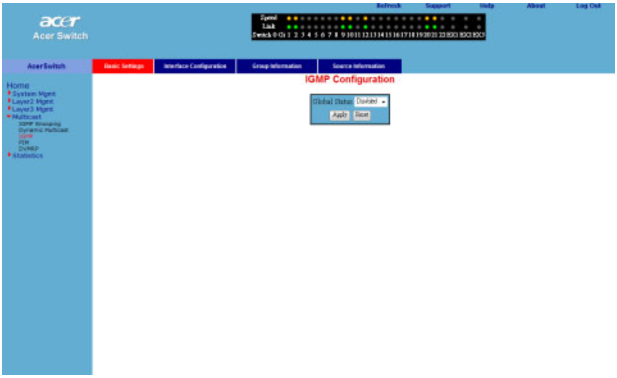
Parameter	Description
Port	This parameter specifies the Port index.
Dynamic Multicast Status	This parameter enables or disables dynamic multicast on this port.
Restricted Group Registration	This parameter enables or disables RESTRICTED GROUP REGISTRATION on this port.

IGMP

The IGMP page allows you to configure the IGMP protocol. The IGMP protocol in the switch can be configured through the following pages:

- “Basic Settings” on page 459
- “Interface Configuration” on page 460
- “Group Information” on page 461
- “Source Information” on page 462

Basic Settings

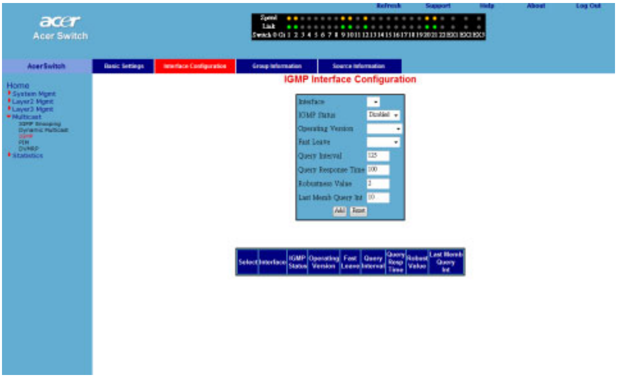

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch
AcerSwitch
Basic Settings
Interface Configuration
Group Information
Source Information
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Apply
Reset

IGMP Configuration

Global Status: Disabled

Clicking the IGMP CONFIGURATION tab brings up the IGMP CONFIGURATION page, whose single parameter allows you to enable or disable IGMP in the switch.

Interface Configuration


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EXI EX2 EX3
AcerSwitch
Basic Settings
Interface Configuration
Group Information
Source Information
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Add
Reset

IGMP Interface Configuration

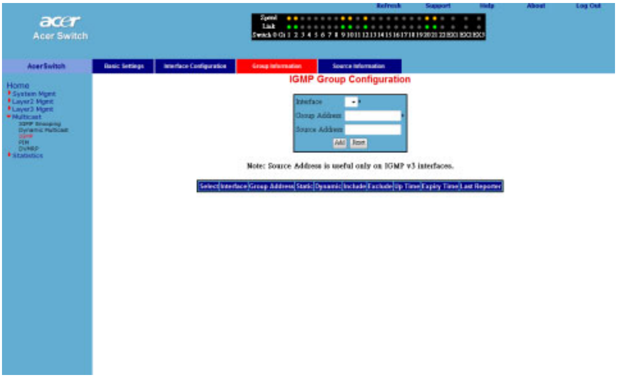
Interface
IGMP Status: Disabled
Operating Version
Fast Leave
Query Interval: 125
Query Response Time: 100
Robustness Value: 2
Last Memb Query Int: 10

Select	Interface	IGMP Status	Operating Version	Fast Leave	Query Interval	Query Resp Time	Robust Value	Last Memb Query Int

Clicking the INTERFACE CONFIGURATION tab brings up the IGMP INTERFACE CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Interface	This parameter specifies the interface index.
IGMP Status	This parameter specifies the IGMP Status.
Operating Version	With this parameter you can choose to run either in *IGMP Version 1*, *IGMP Version 2* or *IGMP Version 3.* This can be configured for every interface.
Fast Leave	This parameter indicates whether the fast leave processing for a specific interface, is to be enabled or disabled.
Query Interval	This parameter indicates the interval between two successive IGMP queries.
Query Response Time	This parameter specifies the response time for IGMP queries.
Robustness Value	This parameter specifies the ROBUSTNESS VALUE on this interface.

Group Information


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 RX1 RX2 RX3
AcerSwitch
Basic Settings
Interface Configuration
Group Information
Source Information
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
IGMP Group Configuration
Interface
Group Address
Source Address
Add
Reset

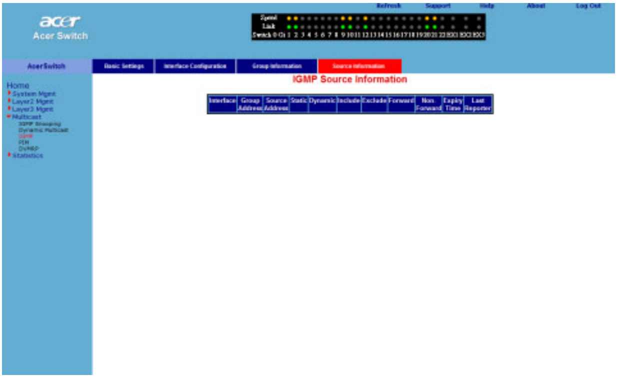
Note: Source Address is useful only on IGMP v3 interfaces.

Select	Interface	Group Address	Static	Dynamic	Include	Exclude	Up Time	Expiry Time	Last Reporter

Clicking the GROUP INFORMATION tab brings up the IGMP GROUP CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Interface	This parameter specifies the interface index.
Group Address	This parameter specifies the IP multicast group address.
Source Address	This parameter represents the IP Source address. **NOTE:** Source configuration is allowed only when the operating version is v3 on this interface.
Filter Mode	This parameter specifies the FILTER MODE.

Source Information


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Interface Configuration
Group Information
Source Information
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics

IGMP Source Information

Interface	Group Address	Source Address	Static	Dynamic	Include	Exclude	Forward	Non Forward	Expiry Time	Last Reporter

Clicking the Source Information tab brings up the IGMP Source Information page. The parameters for this page are shown in the following table.

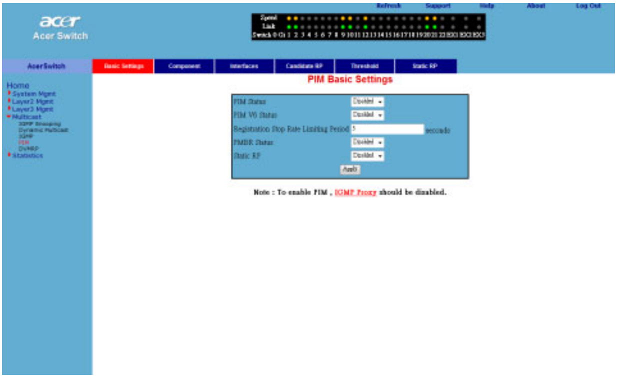
Parameter	Description
Group Address	This parameter specifies the IP multicast group address.
Interface	This parameter specifies the interface index.
Source Address	This parameter represents the IP Source address.

PIM

The PIM link allows you to perform PIM related configuration through the following pages:

- “Basic Settings” on page 463
- “Component” on page 464
- “Interfaces” on page 465
- “Candidate RPs” on page 466
- “Threshold” on page 467
- “Static RP” on page 468

Basic Settings


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX0 EX2 EX3
AcerSwitch
Basic Settings
Component
Interfaces
Candidate RP
Threshold
Static RP
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Apply

PIM Basic Settings

PIM Status: Disabled
PIM V6 Status: Disabled
Registration Stop Rate Limiting Period: 5 seconds
PMBR Status: Disabled
Static RP: Disabled

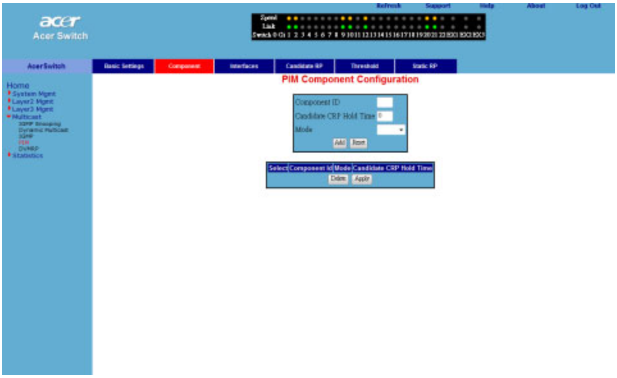
Note : To enable PIM , IGMP Proxy should be disabled.

Clicking the Basic Settings tab brings up the PIM Basic Settings page, which specifies the PIM status in the switch. The parameters for this page are shown in the following table.

Parameter	Description
PIM Status	This parameter allows you to enable or disable the PIM status in the switch.
PIM V6 Status	This parameter allows you to enable or disable the PIM V6 status in the switch.

Parameter	Description
Registration Stop Rate Limiting Period	This parameter specifies the registration stop rate limiting period in seconds.
PMBR Status	This parameter allows you to enable or disable the PMBR status in the switch.
Static RP	This parameter allows you to enable or disable the Static RP in the switch.

Component


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Component
Interfaces
Candidate RP
Threshold
Static RP
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Add
Reset
Delete
Apply

PIM Component Configuration

Component ID
Candidate CRP Hold Time 0
Mode

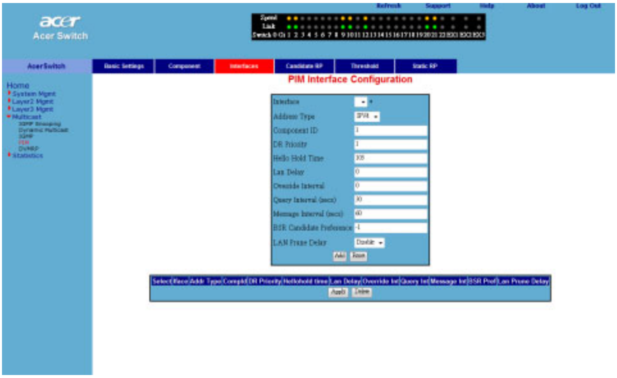
Select	Component Id	Mode	Candidate CRP Hold Time

Clicking the COMPONENT tab brings up the PIM COMPONENT CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Component ID	This parameter specifies a number uniquely identifying the component.

Parameter	Description
Candidate CRP Hold Time	This parameter specifies the hold time of the component when it is a candidate RP in the local domain.
Mode	This parameter specifies the mode of the component. It can be *Sparse* or *Dense*.
BSR Address	This parameter specifies the IP address of the bootstrap router for the local PIM region, which is a read-only field.
BSR Expiry Time	This parameter indicates the minimum time remaining before the bootstrap router in the local domain is declared down, which is a read-only field.

Interfaces


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
Basic Settings
Component
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Threshold
Static RP
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Add
Reset
Apply
Delete

PIM Interface Configuration

Interface	*
Address Type	IPV4
Component ID	1
DR Priority	1
Hello Hold Time	105
Lan Delay	0
Override Interval	0
Query Interval (secs)	30
Message Interval (secs)	60
BSR Candidate Preference	-1
LAN Prune Delay	Disable

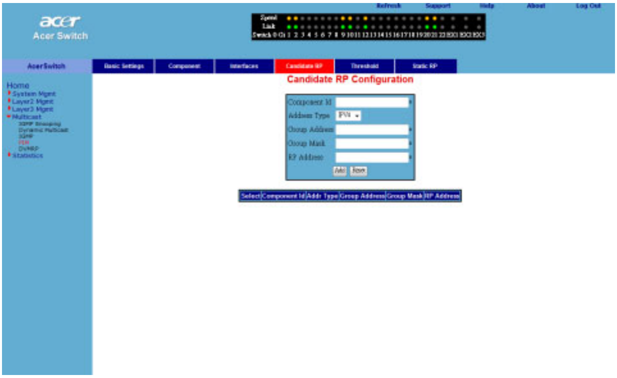
Select	Iface	Addr Type	CompId	DR Priority	Hellohold time	Lan Delay	Override Int	Query Int	Message Int	BSR Pref	Lan Prune Delay

Clicking the INTERFACES tab brings up the PIM INTERFACE CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Interface	This parameter specifies the interface index.

Parameter	Description
Component ID	This parameter specifies a number uniquely identifying the component.
Hello Interval (Seconds)	This parameter specifies the time interval between two successive Hello messages being sent by PIM on this interface.
Join Prune Interval (Seconds)	This parameter specifies the time interval between two successive Join/Prune messages being sent by PIM on this interface.
CBSR Preference	This parameter indicates the preference value for the local interface as a candidate bootstrap router.
Row Status	This parameter indicates the operational status of the entry.

Candidate RPs


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EXO1 EXO2 EXO3
AcerSwitch
Basic Settings
Component
Interfaces
Candidate RP
Threshold
Static RP
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Add
Reset

Candidate RP Configuration

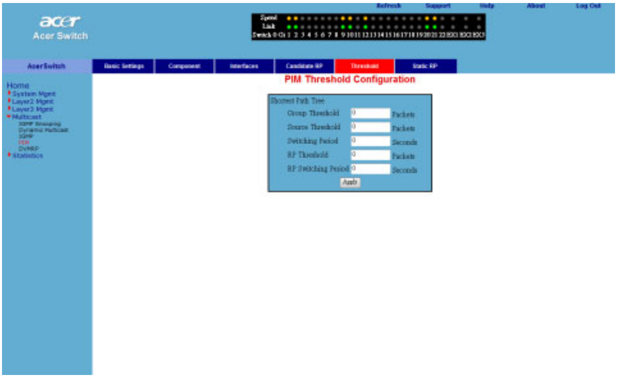
Component Id
Address Type IPv4
Group Address
Group Mask
RP Address

Select	Component Id	Addr Type	Group Address	Group Mask	RP Address

Clicking the CANDIDATE RPs tab brings up the CANDIDATE RP CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Component ID	This parameter specifies a number uniquely identifying the component.
Group Address	This parameter represents the multicast group, for which the switch advertises itself as the candidate RP.
Group Mask	This parameter specifies the subnet mask, which when combined with the group address gives the group prefix.
RP Address	This parameter represents the IP address of the Candidate-RP.

Threshold


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 G1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Component
Interfaces
Candidate RP
Threshold
Static RP
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Apply

PIM Threshold Configuration

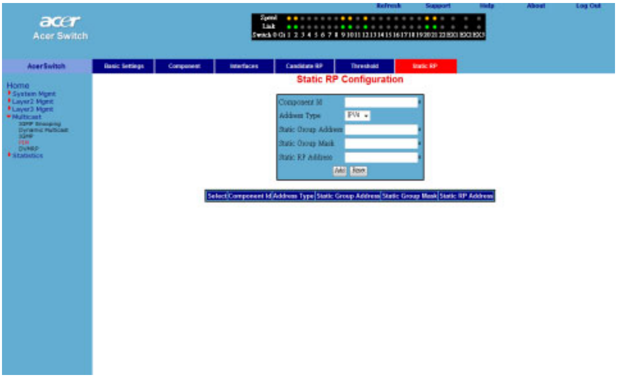
Shortest Path Tree

Group Threshold	0	Packets
Source Threshold	0	Packets
Switching Period	0	Seconds
RP Threshold	0	Packets
RP Switching Period	0	Seconds

Clicking the THRESHOLD tab brings up the PIM THRESHOLD CONFIGURATION page. The parameters for this page are shown in the following table.

Parameter	Description
Group Threshold	This parameter is a bits-per-second (BPS) value that when it exceeds a certain value, initiates source specific counters for a particular group.
Source Threshold	This parameter is a bits-per-second (BPS) value that when exceeds a certain value, initiates switching to shortest path tree.
Switching Period	This parameter specifies the time interval that the data rate is monitored for, initiating the counters or for switching to SPT.
RP Threshold	When the number of registered packets received exceeds this threshold value, RP initiates switching to SPT.
RP Switching Period	This parameter specifies the time interval for which the registered packets are monitored to initiate switching to SPT.

Static RP


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Component
Interfaces
Candidate RP
Threshold
Static RP
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Add
Reset

Static RP Configuration

Component Id
Address Type IPV4
Static Group Address
Static Group Mask
Static RP Address

Select	Component Id	Address Type	Static Group Address	Static Group Mask	Static RP Address

Clicking the STATIC RP tab brings up the STATIC RP CONFIGURATION page, which configure static PIM RPs (Rendezvous Points). The parameters for this page are shown in the following table.

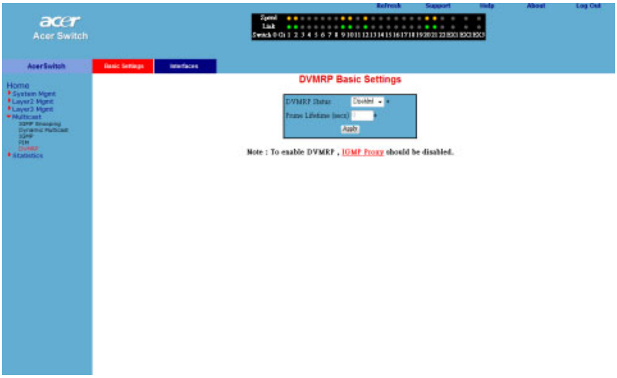
Parameter	Description
Component ID	This parameter specifies a number uniquely identifying the component.
Address Type	This parameter chooses the IPv4 or IPv6 address type.
Static Group Address	This parameter represents the multicast group, for which the switch advertises itself as the candidate RP.
Static Group Mask	This parameter specifies the subnet mask, which when combined with the group address gives the group prefix.
Static RP Address	This parameter represents the IP address of the candidate RP.

DVMRP

The DVMRP page allows you to configure the DVMRP protocol using the following pages:

- “DVMRP Basic Settings” on page 470
- “Interfaces” on page 471

DVMRP Basic Settings


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Basic Settings
Interfaces
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
Apply

DVMRP Basic Settings

DVMRP Status: Disabled *

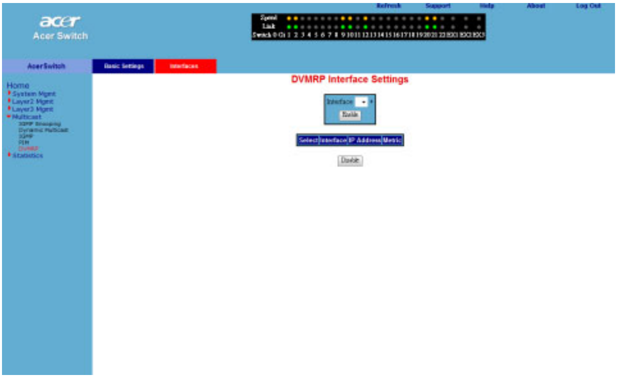
Prune Lifetime (secs): *

Note : To enable DVMRP , IGMP Proxy should be disabled.

Clicking the BASIC SETTINGS tab brings up the DVMRP BASIC SETTINGS page. The parameters for this page are shown in the following table.

Parameter	Description
DVMRP Status	DVMRP can be enabled or disabled in the switch using this field.
Prune Lifetime (Seconds)	This parameter represents the Prune Life Time Configuration value.

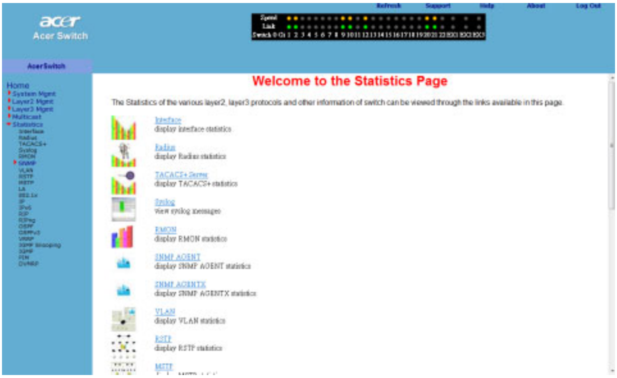
Interfaces


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Basic Settings
Interfaces
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
IGMP Snooping
Dynamic Multicast
IGMP
PIM
DVMRP
Statistics
DVMRP Interface Settings
Interface
Select
Interface
IP Address
Metric

Clicking the INTERFACES tab brings up the DVMRP INTERFACE SETTINGS page, which displays the following parameters: Interface, IP Address, and Metric. The parameters for this page are shown in the following table.

Parameter	Description
Interface	This parameter specifies the Interface Index.
IP Address	This parameter specifies the IP Address of the interface, which is a read-only field.
Metric	This parameter specifies the distance metric for this interface, which is used to calculate distance vectors.

Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

Welcome to the Statistics Page

The Statistics of the various layer2, layer3 protocols and other information of switch can be viewed through the links available in this page.

Interface
display interface statistics

Radius
display Radius statistics

TACACS+ Server
display TACACS+ statistics

Syslog
view syslog messages

RMON
display RMON statistics

SNMP AGENT
display SNMP AGENT statistics

SNMP AGENTX
display SNMP AGENTX statistics

VLAN
display VLAN statistics

RSTP
display RSTP statistics

MSTP

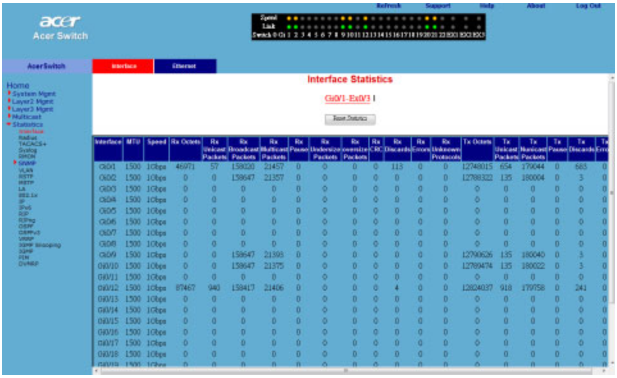
The STATISTICS HOME page contains links to all statistical information for all switch features.

Interface

The Interface link allows you to configure the following pages:

- “Interface Statistics” on page 473
- “Ethernet Statistics” on page 474

Interface Statistics


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch
AcerSwitch
Interface
Ethernet
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP
Reset Statistics

Interface Statistics

Gi0/1-Ex0/3

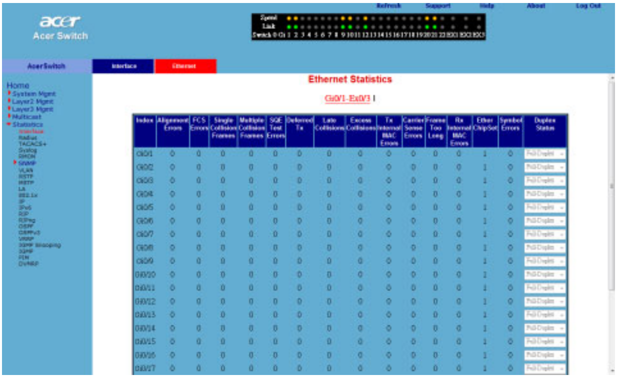
Interface	MTU	Speed	Rx Octets	Rx Unicast Packets	Rx Broadcast Packets	Rx Multicast Packets	Rx Pause	Rx Undersize Packets	Rx oversize Packets	Rx CRC	Rx Discards	Rx Errors	Rx Unknown Protocols	Tx Octets	Tx Unicast Packets	Tx Nunicast Packets	Tx Pause	Tx Discards	Tx Erro
Gi0/1	1500	1Gbps	46971	57	158020	21457	0	0	0	0	113	0	0	12748015	654	179044	0	683	0
Gi0/2	1500	1Gbps	0	0	158647	21357	0	0	0	0	0	0	0	12788322	135	180004	0	3	0
Gi0/3	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/4	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/5	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/6	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/7	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/8	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/9	1500	1Gbps	0	0	158647	21398	0	0	0	0	0	0	0	12790626	135	180040	0	3	0
Gi0/10	1500	1Gbps	0	0	158647	21375	0	0	0	0	0	0	0	12789474	135	180022	0	3	0
Gi0/11	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/12	1500	1Gbps	87467	940	158417	21406	0	0	0	0	4	0	0	12824037	918	179758	0	241	0
Gi0/13	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/14	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/15	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/16	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/17	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/18	1500	1Gbps	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Clicking the INTERFACE tab brings up the INTERFACE STATISTICS page. The parameters for this page are shown in the following table.

Parameter	Description
Index	This parameter specifies the Port index.
MTU	This parameter specifies the Max Transfer Unit bytes.
Speed (Bits Per Second)	This parameter specifies the port speed in bits per second.
Received Octets	This parameter specifies the number of bytes received.
Received Unicast Packets	This parameter specifies the number of unicast packets received.
Received Nunicast Packets	This parameter specifies the number of non-unicast packets received.
Received Discards	This parameter specifies the number of packets discared due to errors.
Received Errors	This parameter specifies the number of packets received with errors.

Parameter	Description
Received Unknown Protocols	This parameter specifies the number of packets received with an unknown protocol.
Transmitted Octets	This parameter specifies the number of bytes transmitted.
Transmitted Unicast Packets	This parameter specifies the number of unicast packets transmitted.
Transmitted Nunicast Packets	This parameter specifies the number of non-unicast packets transmitted.
Transmitted Discards	This parameter specifies the number of packets discarded due to transmit errors.
Transmitted Errors	This parameter specifies the number of transmit errors.

Ethernet Statistics



Ethernet Statistics

Gi0/1-Ex0/3 |

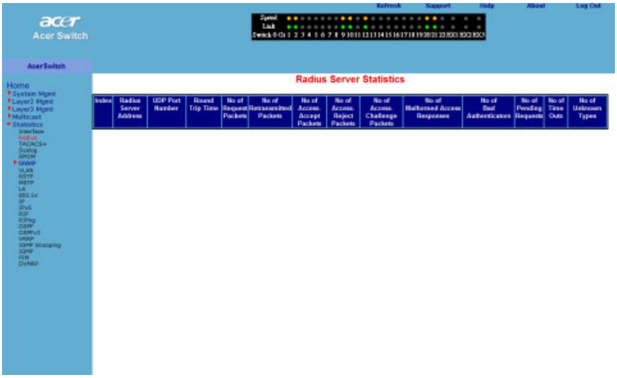
Index	Alignment Errors	FCS Errors	Single Collision Frames	Multiple Collision Frames	SQE Test Errors	Deferred Tx	Late Collisions	Excess Collisions	Tx Internal MAC Errors	Carrier Sense Errors	Frame Too Long	Rx Internal MAC Errors	Ether ChipSet	Symbol Errors	Duplex Status
Gi0/1	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/2	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/3	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/4	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/5	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/6	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/7	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/8	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/9	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/10	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/11	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/12	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/13	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/14	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/15	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/16	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex
Gi0/17	0	0	0	0	0	0	0	0	0	0	0	0	1	0	Full Duplex

Clicking the ETHERNET tab brings up the ETHERNET STATISTICS page. The parameters for this page are shown in the following table.

Parameter	Description
Index	This parameter specifies the port index.
Alignment Errors	This parameter specifies the number of alignment errors. Alighment errors generally indicate improper byte-alignment for Ethernet packets.
FCS Errors	This parameter specifies the number of packets received with checksum errors.
Single Collision Frames	This parameter specifies the number of frames received with a collision.
Multiple Collision Frames	This parameter specifies the number of frames received with multiple collisions.
SQE Test Errors	This parameter specifies the number of Signal Quality Errors that have occurred.
Deferred Transmissions	This parameter specifies the number of frames deferred for transmissions due to network sense.
Late Collisions	This parameter specifies the number of frames faced late collisions. A collision is considered late if the jam occurs after 512 bit-times, or 64 bytes.
Excess Collisions	This parameter specifies the number of excess collisions detected. Excessive Collisions describe the situation where a station has tried 16 times to transmit without success and discards the frame. This means that there is excessive traffic on the network and this must be reduced.
Transmitted Internal MAC Errors	This parameter specifies the number of MAC transmit errors.
Carrier Sense Errors	This parameter specifies the number of carrier sense errors.
Frame Too Long	This parameter specifies the number of too long frames received for transmission.
Received Internal MAC Errors	This parameter specifies the number of MAC received errors.

Parameter	Description
Symbol Errors	This parameter specifies the number of symbol errors.
Duplex Status	This parameter specifies the current status of duplex.

Radius


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 G1 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 XG1 XG2 XG3
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

Radius Server Statistics

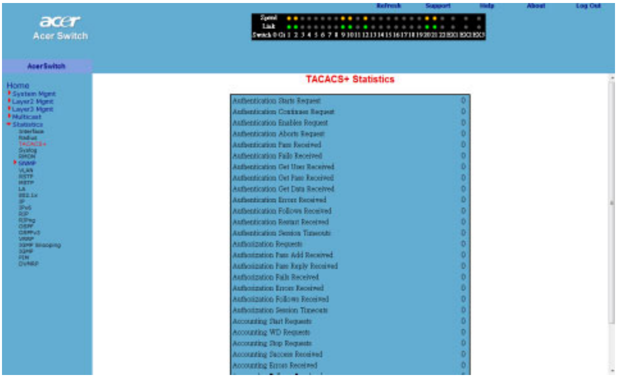
Index	Radius Server Address	UDP Port Number	Round Trip Time	No of Request Packets	No of Retransmitted Packets	No of Access Accept Packets	No of Access Reject Packets	No of Access Challenge Packets	No of Malformed Access Responses	No of Bad Authenticators	No of Pending Requests	No of Time Outs	No of Unknown Types

Clicking the RADIUS link brings up the RADIUS SERVER STATISTICS page. The parameters for this page are shown in the following table.

Parameter	Description
Index	This parameter specifies the port index.
Radius Server Address	This parameter specifies the RADIUS SERVER ADDRESS.
UDP Port Number	This parameter specifies the UDP PORT NUMBER.
Round Trip Time	This parameter displays the ROUND TRIP TIME in seconds.
No of Request Packets	This parameter specifies the number of request packets transmitted.

Parameter	Description
No of Retransmitted Packets	This parameter specifies the number of packets retransmitted.
No of Access-Accept Packets	This parameter specifies the number of accept packets.
No of Access-Reject Packets	This parameter specifies the number of reject packets.
No of Access-Challenge Packets	This parameter specifies the number of challenge packets.
No of Malformed Access Responses	This parameter specifies the number of invalid access responses received.
No of Bad Authenticators	This parameter specifies the number of failed authentications.
No of Pending Requests	This parameter specifies the number of currently pending requests.
No of Time Outs	This parameter specifies the number of time outs that have happened.
No of Unknown Types	This parameter specifies the number of unknown types that have been received.

TACACS+ Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP

TACACS+ Statistics

Authentication Starts Request	0
Authentication Continues Request	0
Authentication Enables Request	0
Authentication Aborts Request	0
Authentication Pass Received	0
Authentication Fails Received	0
Authentication Get User Received	0
Authentication Get Pass Received	0
Authentication Get Data Received	0
Authentication Errors Received	0
Authentication Follows Received	0
Authentication Restart Received	0
Authentication Session Timeouts	0
Authorization Requests	0
Authorization Pass Add Received	0
Authorization Pass Reply Received	0
Authorization Fails Received	0
Authorization Errors Received	0
Authorization Follows Received	0
Authorization Session Timeouts	0
Accounting Start Requests	0
Accounting WD Requests	0
Accounting Stop Requests	0
Accounting Success Received	0
Accounting Errors Received	0

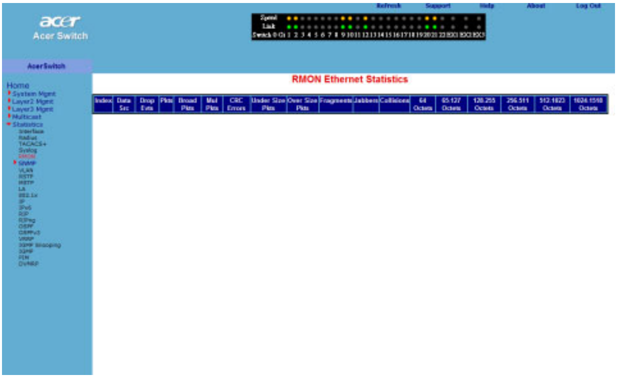
Clicking the TACACS+ link brings up the TACACS+ STATISTICS page. The parameters for this page are shown in the following table.

Parameter	Description
Authentication Starts Request	This parameter specifies the number of authentication starts requested.
Authentication Continues Request	This parameter specifies the number of authentication continues requested.
Authentication Enables Request	This parameter specifies the number of authentication enables requested.
Authentication Aborts Request	This parameter specifies the number of authentication aborts requested.
Authentication Pass Received	This parameter specifies the number of authentication passes received.
Authentication Fails Received	This parameter specifies the number of authentication fails received.
Authentication Get User Received	This parameter specifies the number of authentication get users received.

Parameter	Description
Authentication Get Pass Received	This parameter specifies the number of authentication get passes received.
Authentication Get Data Received	This parameter specifies the number of authentication get datas received.
Authentication Errors Received	This parameter specifies the number of authentication errors received.
Authentication Follows Received	This parameter specifies the number of authentication follows received.
Authentication Restart Received	This parameter specifies the number of authentication restarts received.
Authentication Session Timeouts	This parameter specifies the number of authentication session timeouts received.
Authorization Requests	This parameter specifies the number of authentication requests received.
Authorization Pass Add Received	This parameter specifies the number of authentication pass adds received.
Authorization Pass Reply Received	This parameter specifies the number of authentication pass replies received.
Authorization Fails Received	This parameter specifies the number of authentication fails received.
Authorization Errors Received	This parameter specifies the number of authentication errors received.
Authorization Follows Received	This parameter specifies the number of authentication follows received.
Authorization Session Timeouts	This parameter specifies the number of authentication session timeouts.
Accounting Start Requests	This parameter specifies the number of accounting start requests.
Accounting WD Requests	This parameter specifies the number of accounting WD requests.

Parameter	Description
Accounting Stop Requests	This parameter specifies the number of accounting stop requests.
Accounting Success Received	This parameter specifies the number of accounting successes received.
Accounting Errors Received	This parameter specifies the number of accounting errors received.
Accounting Follows Received	This parameter specifies the number of accounting follows received.
Accounting Session Timeouts	This parameter specifies the number of accounting sessions received.
Malformed Packets Received	This parameter specifies the number of malformed packets received.
Socket Failures	This parameter specifies the number of socket failures.
Connection Failures	This parameter specifies the number of connection failures.

RMON Ethernet Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gt 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

RMON Ethernet Statistics

Index	Data Src	Drop Evts	Pkts	Broad Pkts	Mul Pkts	CRC Errors	Under Size Pkts	Over Size Pkts	Fragments	Jabbers	Collisions	64 Octets	65-127 Octets	128-255 Octets	256-511 Octets	512-1023 Octets	1024-1518 Octets

Clicking the RMON link brings up the RMON ETHERNET STATISTICS page, which displays RMON Ethernet statistics information. The parameters for this page are shown in the following table.

Parameter	Description
Index	This parameter specifies the index.
Port	This parameter specifies the port.
Octets	This parameter specifies the number of octets received.
Packets	This parameter specifies the number of packets received.
Broadcast Packets	This parameter specifies the number of broadcast packets received.
Multicast Packets	This parameter specifies the number of multicast packets received.
CRC Errors	This parameter specifies the number of packets received with crc errors.
Under Size Packets	This parameter specifies the number of under size packets received.
Over Size Packtes	This parameter specifies the number of over size packets received.
Fragments	This parameter specifies the number of fragments received.
Jabbers	This parameter specifies the number of jabbers.
Collisions	This parameter specifies the number of collisions.
64 Octets	This parameter specifies the number of Ethernet packets received with a size less than 64 bytes.
65-127 Octets	This parameter specifies the number of Ethernet packets received with a size between 65 and 127 bytes.
128-255 Octets	This parameter specifies the number of Ethernet packets received with a size between 128 and 255 bytes.

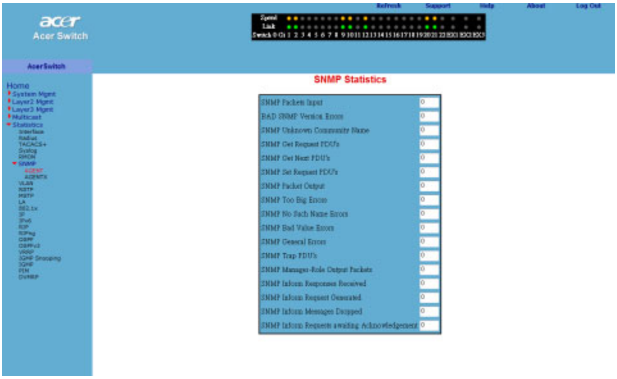
Parameter	Description
256-511 Octets	This parameter specifies the number of Ethernet packets received with a size between 256 and 511 bytes.
512-1023 Octets	This parameter specifies the number of Ethernet packets received with a size between 512 and 1023 bytes.
1024-1518 Octets	This parameter specifies the number of Ethernet packets received with a size between 1024 and 1518 bytes.

SNMP Statistics

The SNMP Statistics link allows you to configure SNMP Statistics through the following pages:

- "Agent" on page 483
- "SNMP AgentX" on page 485

Agent


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
AGENT
AGENTX
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

SNMP Statistics

SNMP Packets Input	0
BAD SNMP Version Errors	0
SNMP Unknown Community Name	0
SNMP Get Request PDU's	0
SNMP Get Next PDU's	0
SNMP Set Request PDU's	0
SNMP Packet Output	0
SNMP Too Big Errors	0
SNMP No Such Name Errors	0
SNMP Bad Value Errors	0
SNMP General Errors	0
SNMP Trap PDU's	0
SNMP Manager-Role Output Packets	0
SNMP Inform Responses Received	0
SNMP Inform Request Generated	0
SNMP Inform Messages Dropped	0
SNMP Inform Requests awaiting Acknowledgement	0

Clicking the SNMP AGENT link brings up the SNMP STATISTICS page, which displays SNMP statistics. The parameters for this page are shown in the following table.

Parameter	Description
SNMP Packets Input	This parameter specifies the number of SNMP packets input.
BAD SNMP Version Errors	This parameter specifies the number of BAD SNMP version errors.
SNMP Unknown Community Name	This parameter specifies the number of SNMP unknown community names.
SNMP Get Request PDU's	This parameter specifies the number of SNMP Get Request PDU's.

Parameter	Description
SNMP Get Next PDU's	This parameter specifies the number of SNMP Get Next PDU's.
SNMP Set Request PDU's	This parameter specifies the number of SNMP Set Request PDU's.
SNMP Packet Output	This parameter specifies the number of SNMP packets output.
SNMP Too Big Errors	This parameter specifies the number of SNMP Too Big errors,
SNMP No Such Name Errors	This parameter specifies the number of SNMP No Such Name errors,
SNMP Bad Value Errors	This parameter specifies the number of SNMP Bad Value errors.
SNMP General Errors	This parameter specifies the number of SNMP General errors.
SNMP Trap PDU's	This parameter specifies the number of SNMP Trap PDU's.
SNMP Manager-Role Output Packets	This parameter specifies the number of SNMP Manager-Role Output packets.
SNMP Inform Responses Received	This parameter specifies the number of SNMP Inform responses received.
SNMP Inform Request Generated	This parameter specifies the number of SNMP Inform requests generated.
SNMP Inform Messages Dropped	This parameter specifies the number of SNMP Inform messages dropped.
SNMP Inform Requests awaiting Acknowledgement	This parameter specifies the number of SNMP Inform requests awaiting acknowledgement.

SNMP AgentX

Clicking the AGENTX link brings up the AGENTX SUBAGENT STATISTICS page (not shown), which displays Agentx Subagent information. The parameters for this page are shown in the following table.

Parameter	Description
Transmit Statistics	
Transmitted Packets	This parameter specifies the number of packets transmitted.
Open PDU	This parameter specifies the number of open PDUs transmitted.
IndexAlloc PDU	This parameter specifies the number of IndexAlloc PDUs transmitted.
Register PDU	This parameter specifies the number of register PDUs transmitted.
Add Agent Caps PDU	This parameter specifies the number of add agent caps PDUs transmitted.
Notify PDU	This parameter specifies the number of notify PDUs transmitted.
Ping PDU	This parameter specifies the number of ping PDUs transmitted.
Remove Agent Caps PDU	This parameter specifies the number of remove agent caps PDUs transmitted.
IndexDeAlloc PDU	This parameter specifies the number of IndexDeAlloc PDUs transmitted.
UnRegister PDU	This parameter specifies the number of unregister PDUs transmitted.
Close PDU	This parameter specifies the number of close PDUs transmitted.
Response PDU	This parameter specifies the number of response PDUs transmitted.

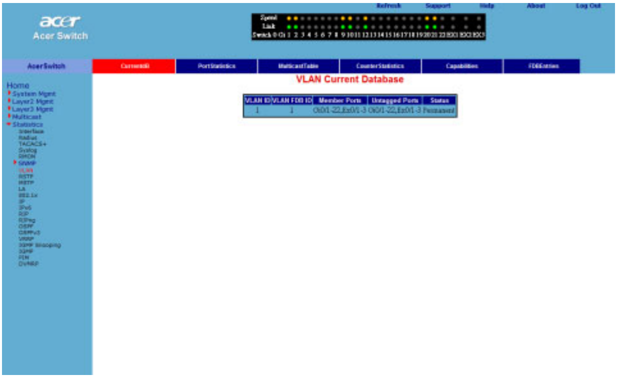
Parameter	Description
Received Statistics	
Received Packets	This parameter specifies the number of packets received.
Get Request PDU	This parameter specifies the number of get request PDUs received.
Get Next PDU	This parameter specifies the number of get next PDUs received.
Get Bulk PDU	This parameter specifies the number of get bulk PDUs received.
TestSet PDU	This parameter specifies the number of test set PDUs received.
Commit PDU	This parameter specifies the number of commit PDUs received.
Cleanup PDU	This parameter specifies the number of cleanup PDUs received.
Undo PDU	This parameter specifies the number of undo PDUs received.
Dropped Packets	This parameter specifies the number of dropped packets.
Parse Drop Errors	This parameter specifies the number of received PDUs dropped due to parse errors.
Open Fail Errors	This parameter specifies the number of open fail PDUs received.
Close PDU	This parameter specifies the number of close PDUs received.
Response PDU	This parameter specifies the number of response PDUs received.

VLAN

The VLAN link allows you to view VLAN statistics through the following pages:

- "Current DB" on page 487
- "VLAN Port Statistics" on page 488
- "VLAN Multicast Table" on page 489
- "VLAN Counter Statistics" on page 490
- "VLAN Capabilities" on page 491
- "VLAN FDB Entries" on page 492

Current DB


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
AcerSwitch
CurrentDB
PortStatistics
MulticastTable
CounterStatistics
Capabilities
FDBEntries
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x

VLAN Current Database

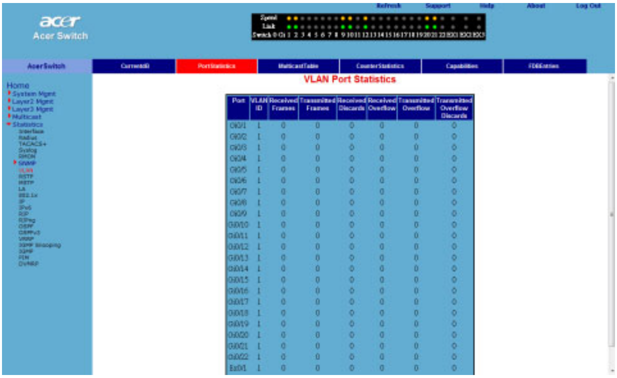
VLAN ID	VLAN FDB ID	Member Ports	Untagged Ports	Status
1	1	Gi0/1-22,Ex0/1-3	Gi0/1-22,Ex0/1-3	Permanent

Clicking the CURRENT DB tab brings up the VLAN CURRENT DATABASE page, which displays VLAN database entries. The parameters for this page are shown in the following table.

Parameter	Description
VLAN ID	This parameter specifies the VLAN identifer.
VLAN FDB ID	This parameter specifies the VLAN filter database identifer.
Member Ports	This parameter specifies the index of member ports.

Parameter	Description
Untagged Ports	This parameter specifies the index of untagged member ports.
Status	This parameter specifies the VALN status.

VLAN Port Statistics


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
CurrentdB
PortStatistics
MulticastTable
CounterStatistics
Capabilities
FDBEntries
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

VLAN Port Statistics

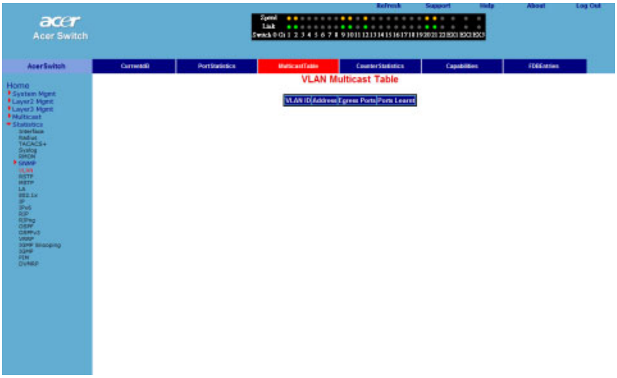
Port	VLAN ID	Received Frames	Transmitted Frames	Received Discards	Received Overflow	Transmitted Overflow	Transmitted Overflow Discards
Gi0/1	1	0	0	0	0	0	0
Gi0/2	1	0	0	0	0	0	0
Gi0/3	1	0	0	0	0	0	0
Gi0/4	1	0	0	0	0	0	0
Gi0/5	1	0	0	0	0	0	0
Gi0/6	1	0	0	0	0	0	0
Gi0/7	1	0	0	0	0	0	0
Gi0/8	1	0	0	0	0	0	0
Gi0/9	1	0	0	0	0	0	0
Gi0/10	1	0	0	0	0	0	0
Gi0/11	1	0	0	0	0	0	0
Gi0/12	1	0	0	0	0	0	0
Gi0/13	1	0	0	0	0	0	0
Gi0/14	1	0	0	0	0	0	0
Gi0/15	1	0	0	0	0	0	0
Gi0/16	1	0	0	0	0	0	0
Gi0/17	1	0	0	0	0	0	0
Gi0/18	1	0	0	0	0	0	0
Gi0/19	1	0	0	0	0	0	0
Gi0/20	1	0	0	0	0	0	0
Gi0/21	1	0	0	0	0	0	0
Gi0/22	1	0	0	0	0	0	0
Ex0/1	1	0	0	0	0	0	0

Clicking the PORT STATISTICS tab brings up the VLAN PORT STATISTICS page, which displays the various parameters XXXXXX. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the port index.
VLAN ID	This parameter specifies the VLAN identifer.
Received Frames	This parameter specifies the number of packets received in this VLAN.
Transmitted Frames	This parameter specifies the number of packets transmitted in this VLAN.

Parameter	Description
Received Discards	This parameter specifies the number of received packets discarded.
Received Overflow	This parameter specifies the number of received overflow packets.
Transmitted Overflow	This parameter specifies the number of transmit overflows.
Transmitted Overflow Discards	This parameter specifies the number of transmit overflow discards.

VLAN Multicast Table


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
CurrentIB
PortStatistics
MulticastTable
CounterStatistics
Capabilities
FDBEntries
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP

VLAN Multicast Table

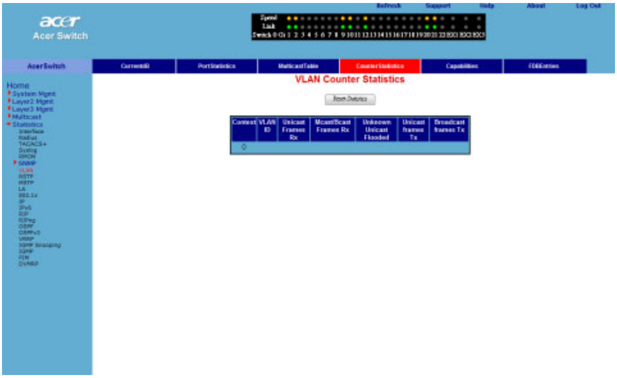
VLAN ID	Address	Egress Ports	Ports Learnt

Clicking the MULTICAST TABLE tab brings up the VLAN MULTICAST TABLE page, which displays multicast VLAN information. The parameters for this page are shown in the following table.

Parameter	Description
VLAN ID	This parameter specifies the VLAN identifer.
Address	This parameter specifies the VLAN address.

Parameter	Description
Egress Ports	This parameter specifies the indexes of egress ports.
Ports Learnt	This parameter specifies the indexes of ports on this VLAN that are learned.

VLAN Counter Statistics


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
MulticastTable
CounterStatistics
Capabilities
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
DHCP
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP
Reset Statistics

VLAN Counter Statistics

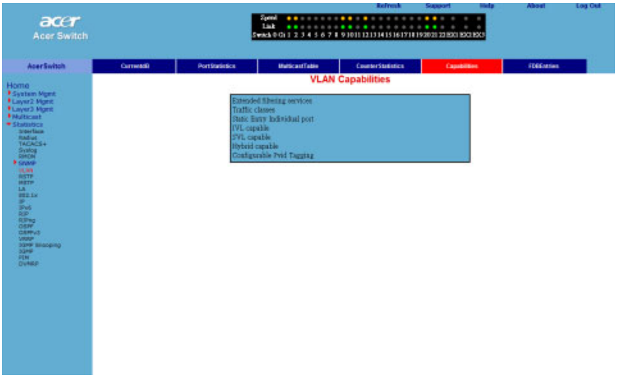
Context	VLAN ID	Unicast Frames Rx	Mcast/Bcast Frames Rx	Unknown Unicast Flooded	Unicast frames Tx	Broadcast frames Tx
0						

Clicking the Counter Statistics link brings up the VLAN Counter Statistics page, which displays VLAN counters. The parameters for this page are shown in the following table.

Parameter	Description
VLAN ID	This parameter specifies the VLAN identifier.
Unicast Frames Rx	This parameter specifies the number of unicast packets received.
Mcast/Bcast Frames Rx	This parameter specifies the number of non-unicast packets received.
Unknown Unicast Flooded	This parameter specifies the number of packets flooded due to unknown unicast.

Parameter	Description
Unicast frames Tx	This parameter specifies the number of unicast packets transmitted.
Broadcast frames Tx	This parameter specifies the number of broadcast packets transmitted.

VLAN Capabilities

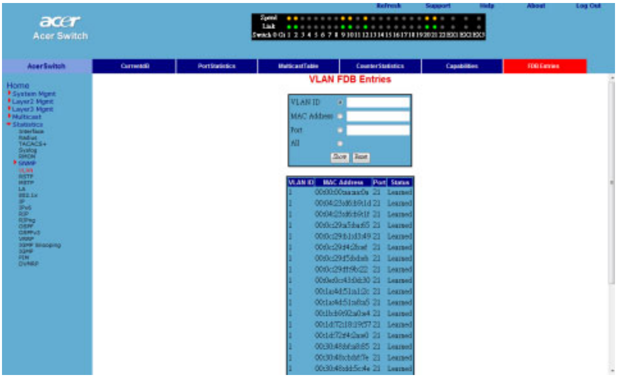

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch
AcerSwitch
CurrentdB
PortStatistics
MulticastTable
CounterStatistics
Capabilities
FDBEntries
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
VLAN Capabilities
Extended filtering services
Traffic classes
Static Entry Individual port
IVL capable
SVL capable
Hybrid capable
Configurable Pvid Tagging

Clicking the CAPABILITIES tab brings up the VLAN CAPABILITIES page, which displays the VLAN capabilities of the switch. The parameters for this page are shown in the following table.

Parameter	Description
Extended Filtering Services	This parameter specifies the number of extended filtering services.
Traffic Classes	This parameter specifies the number of traffic classes
Static Entry Individual port	This parameter specifies the number of Static Entry Individual ports.
IVL capable	This parameter specifies the number of IVL capables.

Parameter	Description
SVL capable	This parameter specifies the number of SVL capables.
Hybrid capable	This parameter specifies the number of Hybrid capables.
Configurable PVID Tagging	This parameter specifies the number of Configurable PVID taggings.

VLAN FDB Entries


Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
AcerSwitch
MulticastTable
CounterStatistics
Capabilities
FDB Entries
VLAN FDB Entries
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
VLAN ID
MAC Address
Port
All
Show
Reset
VLAN ID
MAC Address
Port
Status

Clicking the FDB Entries tab brings up the VLAN FDB Entries page, which displays VLAN filter database entries. The parameters for this page are shown in the following table.

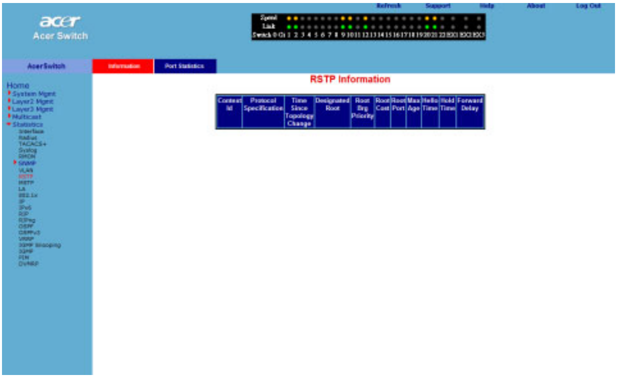
Parameter	Description
VLAN ID	This parameter specifies the VLAN identifier.
MAC Address	This parameter specifies the MAC address learned.
Port	This parameter specifies the Index of port where this entry is learned.
Status	This parameter specifies the Status of this entry.

RSTP Statistics

The RSTP STATISTICS link allows you to view RSTP statistics through the following pages:

- "RSTP Information" on page 493
- "RSTP Port Statistics" on page 494

RSTP Information


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Information
Port Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

RSTP Information

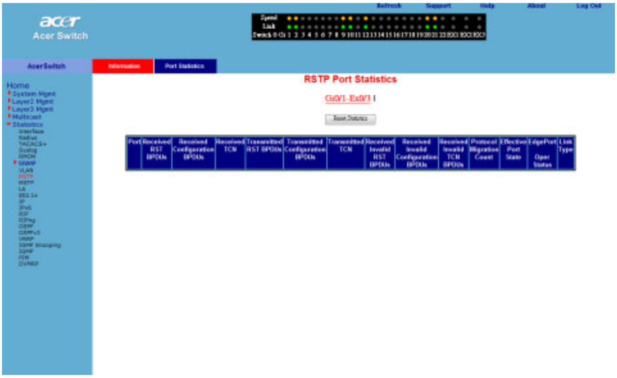
Context Id	Protocol Specification	Time Since Topology Change	Designated Root	Root Brg Priority	Root Cost	Root Port	Max Age	Hello Time	Hold Time	Forward Delay

Clicking the INFORMATION tab brings up the RSTP INFORMATION page, which displays RSTP statistics. The parameters for this page are shown in the following table.

Parameter	Description
Protocol Specification	This parameter specifies the Protocol Specification.
Time Since Topology Change	This parameter specifies the number of seconds since topology changed.
Designated Root	This parameter specifies the designated root bridge address.
Root Brg Priority	This parameter specifies the priority of root bridge.
Root Cost	This parameter specifies the cost to root.

Parameter	Description
Root Port	This parameter specifies the index of the root port.
Max Age	This parameter specifies the max age in seconds.
Hello Time	This parameter specifies the Hello time in seconds.
Hold Time	This parameter specifies the hold time in seconds.
Forward Delay	This parameter specifies the forward delay in seconds.

RSTP Port Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
Information
Port Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP
RSTP Port Statistics
Gi0/1-Ex0/3
Reset Statistics

Port	Received RST BPDUs	Received Configuration BPDUs	Received TCN	Transmitted RST BPDUs	Transmitted Configuration BPDUs	Transmitted TCN	Received Invalid RST BPDUs	Received Invalid Configuration BPDUs	Received Invalid TCN BPDUs	Protocol Migration Count	Effective Port State	EdgePort Oper Status	Link Type

Clicking the PORT STATISTICS tab brings up the RSTP PORT STATISTICS page, which displays RSTP port level statistics. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the port index.
Received RST BPDUs	This parameter specifies the number of RSTP BPDUs received.

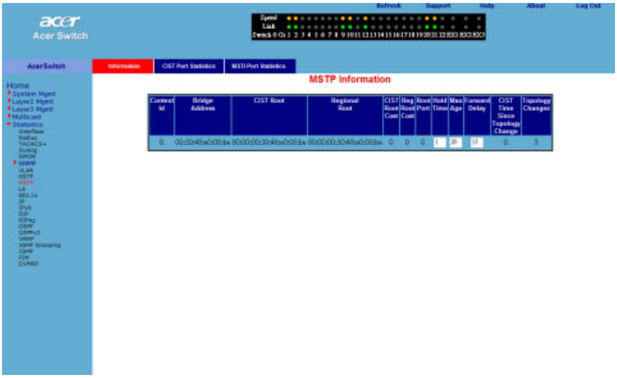
Parameter	Description
Received Configuration BPDUs	This parameter specifies the number of config BPDUs received.
Received TCN	This parameter specifies the number of topology changed notifications received.
Transmitted RST BPDUs	This parameter specifies the number of RSTP BPDUs transmitted.
Transmitted Configuration BPDUs	This parameter specifies the number of config BPDUs transmitted.
Transmitted TCN	This parameter specifies the number of topology change notifications transmitted.
Received Invalid RST BPDUs	This parameter specifies the number of invalid RSTP BPDUs received.
Received Invalid Configuration BPDUs	This parameter specifies the number of invalid configuration BPDUs received.
Received Invalid TCN BPDUs	This parameter specifies the number of invalid topology change BPDUs received.
Protocol Migration Count	This parameter specifies the number of times protocol migration happened.
Effective Port State	This parameter specifies the effective port state.
EdgePort Oper Status	This parameter specifies the operational status of edge port.
Link Type	This parameter specifies the broadcast or point-to-point.

MSTP Statistics

The MSTP Statistics link allows you to view MSTP statistics through the following pages:

- “MSTP Information” on page 496
- “MSTP CIST Statistics” on page 497
- “MSTP MSTI Port Statistics” on page 499

MSTP Information


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EXC1 EXC2 EXC3
AcerSwitch
Information
CIST Port Statistics
MSTI Port Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

MSTP Information

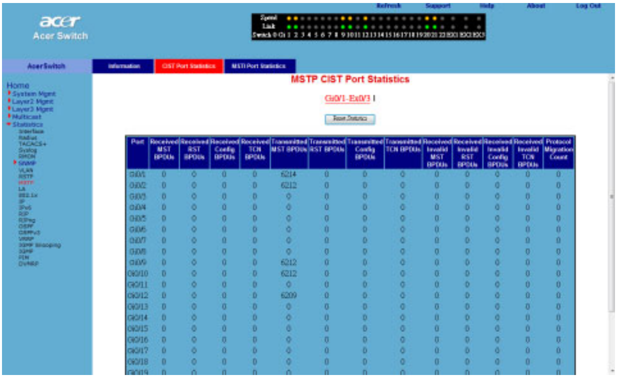
Context Id	Bridge Address	CIST Root	Regional Root	CIST Root Cost	Reg Root Cost	Root Port	Hold Time	Max Age	Forward Delay	CIST Time Since Topology Change	Topology Changes
0	00:30:48:a0:08:be	80:00:00:30:48:a0:08:be	80:00:00:30:48:a0:08:be	0	0	0	1	20	15	0	3

Clicking the INFORMATION tab brings up the MSTP INFORMATION page, which displays MSTP statistics. The parameters for this page are shown in the following table.

Parameter	Description
Bridge Address	This parameter specifies the Bridge Address.
CIST Root	This parameter specifies the CIST root.
Regional Root	This parameter specifies the Regional root.
CIST Root Cost	This parameter specifies the CIST root cost.
Regional Root Cost	This parameter specifies the Regional root cost.
Root Port	This parameter specifies the index of the root port.

Parameter	Description
Hold Time	This parameter specifies the hold time in seconds.
Max Age	This parameter specifies the maximum age in seconds.
Forward Delay	This parameter specifies the forward delay in seconds.
CIST Time Since Topology Change	This parameter specifies the number of seconds since topology last changed.
Topology Changes	This parameter specifies the number of topology changes.

MSTP CIST Statistics


Acer Switch
Refresh
Support
Help
About
Log Out
Acer Switch
Information
CIST Port Statistics
MSTI Port Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Reset Statistics

MSTP CIST Port Statistics

Gi0/1-Ex0/3 |

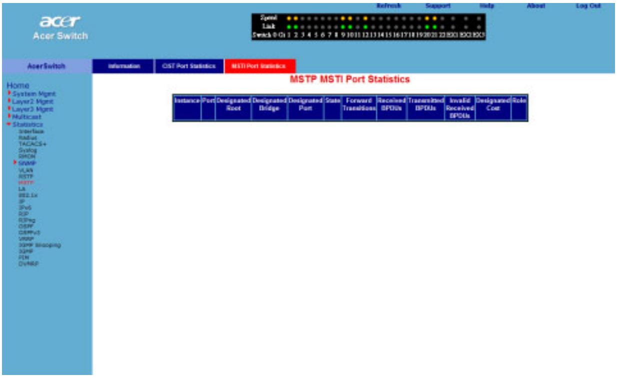
Port	Received MST BPDUs	Received RST BPDUs	Received Config BPDUs	Received TCN BPDUs	Transmitted MST BPDUs	Transmitted RST BPDUs	Transmitted Config BPDUs	Transmitted TCN BPDUs	Received Invalid MST BPDUs	Received Invalid RST BPDUs	Received Invalid Config BPDUs	Received Invalid TCN BPDUs	Protocol Migration Count
Gi0/1	0	0	0	0	6214	0	0	0	0	0	0	0	0
Gi0/2	0	0	0	0	6212	0	0	0	0	0	0	0	0
Gi0/3	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/4	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/5	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/6	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/7	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/8	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/9	0	0	0	0	6212	0	0	0	0	0	0	0	0
Gi0/10	0	0	0	0	6212	0	0	0	0	0	0	0	0
Gi0/11	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/12	0	0	0	0	6209	0	0	0	0	0	0	0	0
Gi0/13	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/14	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/15	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/16	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/17	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/18	0	0	0	0	0	0	0	0	0	0	0	0	0
Gi0/19	0	0	0	0	0	0	0	0	0	0	0	0	0

Clicking the CIST PORT STATISTICS tab brings up the MSTP CIST PORT STATISTICS page, which displays STP CIST port level statistics. The parameters for this page are shown in the following table.

Parameter	Description
Received MST BPDUs	This parameter specifies the number of MSTP BPDUs received.

Parameter	Description
Received RST BPDUs	This parameter specifies the number of RSTP BPDUs received.
Received Config BPDUs	This parameter specifies the number of config BPDUs received.
Received TCN BPDUs	This parameter specifies the number of topology change notification BPDUs received.
Transmitted MST BPDUs	This parameter specifies the number of MSTP BPDUs transmitted.
Transmitted RST BPDUs	This parameter specifies the number of RSTP BPDUs transmitted.
Transmitted Config BPDUs	This parameter specifies the number of config BPDUs transmitted.
Transmitted TCN BPDUs	This parameter specifies the number of topology change notification BPDUs transmitted.
Received Invalid MST BPDUs	This parameter specifies the number of invalid MSTP BPDUs received.
Received Invalid RST BPDUs	This parameter specifies the number of invalid RSTP BPDUs received.
Received Invalid Config BPDUs	This parameter specifies the number of invalid config BPDUs received.
Received Invalid TCN BPDUs	This parameter specifies the number of invalid TCN BPDUs received.
Protocol Migration Count	This parameter specifies the number of times protocol migration happened.

MSTP MSTI Port Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Information
CIST Port Statistics
MSTI Port Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x

MSTP MSTI Port Statistics

Instance	Port	Designated Root	Designated Bridge	Designated Port	State	Forward Transitions	Received BPDUs	Transmitted BPDUs	Invalid Received BPDUs	Designated Cost	Role

Clicking the MSTI Port Statistics tab brings up the MSTP MSTI Port Statistics page, which displays MSTP MSTI port level statistics. The parameters for this page are shown in the following table.

Parameter	Description
Instance	This parameter specifies the MSTP instance Identifer.
Port	This parameter specifies the port index.
Designated Root	This parameter specifies the designated root bridge address.
Designated Bridge	This parameter specifies the designated Bridge address.
Designated Port	This parameter specifies the index of designated port for this MSTP instance.
State	This parameter specifies the current state.
Forward Transitions	This parameter specifies the number of Forward Transitions.

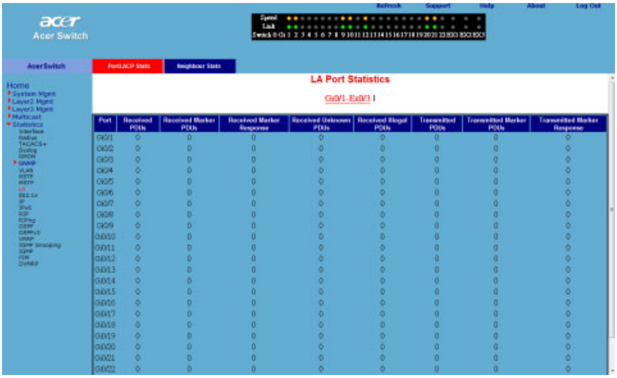
Parameter	Description
Received BPDUs	This parameter specifies the number of BPDUs received.
Transmitted BPDUs	This parameter specifies the number of BPDUs transmitted.
Invalid Received BPDUs	This parameter specifies the number of invalid BPDUs received.
Designated Cost	This parameter specifies the designated cost.
Role	This parameter specifies the current role.

Link Aggregation (LA)

The Link Aggregation link allows you to view Link Aggregation (LA) statistics through the following pages:

- "LA Port Statistics" on page 500
- "LA Neighbor Statistics" on page 502

LA Port Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22
AcerSwitch
PortLACP Stats
Neighbour Stats
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

LA Port Statistics

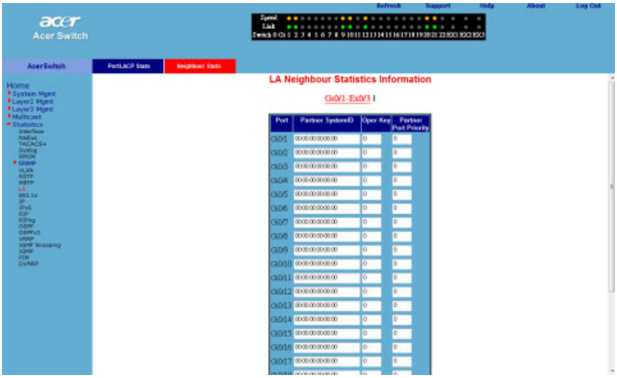
Gi0/1-Ex0/3 |

Port	Received PDUs	Received Marker PDUs	Received Marker Response	Received Unknown PDUs	Received Illegal PDUs	Transmitted PDUs	Transmitted Marker PDUs	Transmitted Marker Response
Gi0/1	0	0	0	0	0	0	0	0
Gi0/2	0	0	0	0	0	0	0	0
Gi0/3	0	0	0	0	0	0	0	0
Gi0/4	0	0	0	0	0	0	0	0
Gi0/5	0	0	0	0	0	0	0	0
Gi0/6	0	0	0	0	0	0	0	0
Gi0/7	0	0	0	0	0	0	0	0
Gi0/8	0	0	0	0	0	0	0	0
Gi0/9	0	0	0	0	0	0	0	0
Gi0/10	0	0	0	0	0	0	0	0
Gi0/11	0	0	0	0	0	0	0	0
Gi0/12	0	0	0	0	0	0	0	0
Gi0/13	0	0	0	0	0	0	0	0
Gi0/14	0	0	0	0	0	0	0	0
Gi0/15	0	0	0	0	0	0	0	0
Gi0/16	0	0	0	0	0	0	0	0
Gi0/17	0	0	0	0	0	0	0	0
Gi0/18	0	0	0	0	0	0	0	0
Gi0/19	0	0	0	0	0	0	0	0
Gi0/20	0	0	0	0	0	0	0	0
Gi0/21	0	0	0	0	0	0	0	0
Gi0/22	0	0	0	0	0	0	0	0

Clicking the PORT LACP STATS tab brings up the LA PORT STATISTICS page, which displays LACP port level statistics. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the port index.
Received PDUs	This parameter specifies the number of LACP PDUs received.
Received Marker PDUs	This parameter specifies the number of Marker PDUs received.
Received Marker Response	This parameter specifies the number of Marker response PDUs received.
Received Unknown PDUs	This parameter specifies the number of unknown PDUs received.
Received Illegal PDUs	This parameter specifies the number of invalid PDUs received.
Transmitted PDUs	This parameter specifies the number of LACP PDUs transmitted.
Transmitted Marker PDUs	This parameter specifies the number of Marker PDUs transmitted.
Transmitted Marker Response	This parameter specifies the number of Marker response PDUs transmitted.

LA Neighbor Statistics


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
PortLACP Stats
Neighbour Stats
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

LA Neighbour Statistics Information

Gi0/1-Ex0/3 |

Port	Partner SystemID	Oper Key	Partner Port Priority
Gi0/1	00:00:00:00:00:00	0	0
Gi0/2	00:00:00:00:00:00	0	0
Gi0/3	00:00:00:00:00:00	0	0
Gi0/4	00:00:00:00:00:00	0	0
Gi0/5	00:00:00:00:00:00	0	0
Gi0/6	00:00:00:00:00:00	0	0
Gi0/7	00:00:00:00:00:00	0	0
Gi0/8	00:00:00:00:00:00	0	0
Gi0/9	00:00:00:00:00:00	0	0
Gi0/10	00:00:00:00:00:00	0	0
Gi0/11	00:00:00:00:00:00	0	0
Gi0/12	00:00:00:00:00:00	0	0
Gi0/13	00:00:00:00:00:00	0	0
Gi0/14	00:00:00:00:00:00	0	0
Gi0/15	00:00:00:00:00:00	0	0
Gi0/16	00:00:00:00:00:00	0	0
Gi0/17	00:00:00:00:00:00	0	0

Clicking the NEIGHBOR STATS tab brings up the LA NEIGHBOR STATISTICS INFORMATION page, which displays LACP neighbor statistics. The parameters for this page are shown in the following table.

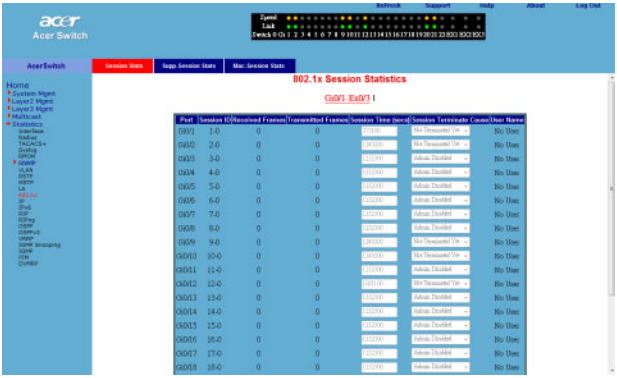
Parameter	Description
Port Index	This parameter specifies the port index.
Partner SystemID	This parameter specifies the Partner SystemID.
Oper Key	This parameter specifies the Oper Key.
Partner Port Priority	This parameter specifies the Partner Port Priority.

802.1X

The 802.1x link allows you to view 802.1x statistics through the following pages:

- "802.1X Session Statistics" on page 503
- "802.1X Supplicant Statistics" on page 504
- "Mac Session Statistics" on page 505

802.1X Session Statistics


Refresh
Support
Help
About
Log Out
Acer Switch
AcerSwitch
Session Stats
Supp Session Stats
Mac Session Stats
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

802.1x Session Statistics

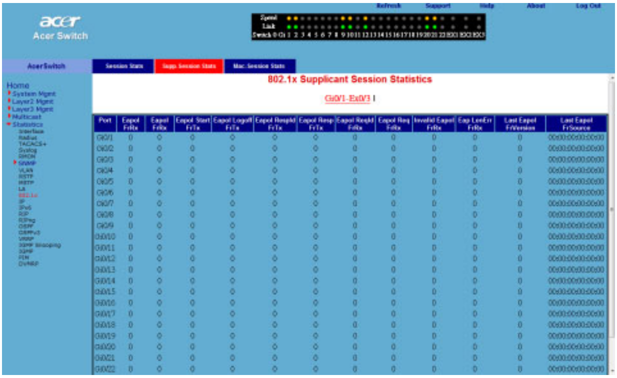
Gi0/1-Ex0/3 |

Port	Session ID	Received Frames	Transmitted Frames	Session Time (secs)	Session Terminate Cause	User Name
Gi0/1	1-0	0	0	[illegible]	Not Terminated Yet	No User
Gi0/2	2-0	0	0	[illegible]	Not Terminated Yet	No User
Gi0/3	3-0	0	0	[illegible]	Admin Disabled	No User
Gi0/4	4-0	0	0	[illegible]	Admin Disabled	No User
Gi0/5	5-0	0	0	[illegible]	Admin Disabled	No User
Gi0/6	6-0	0	0	[illegible]	Admin Disabled	No User
Gi0/7	7-0	0	0	[illegible]	Admin Disabled	No User
Gi0/8	8-0	0	0	[illegible]	Admin Disabled	No User
Gi0/9	9-0	0	0	[illegible]	Not Terminated Yet	No User
Gi0/10	10-0	0	0	[illegible]	Not Terminated Yet	No User
Gi0/11	11-0	0	0	[illegible]	Admin Disabled	No User
Gi0/12	12-0	0	0	[illegible]	Not Terminated Yet	No User
Gi0/13	13-0	0	0	[illegible]	Admin Disabled	No User
Gi0/14	14-0	0	0	[illegible]	Admin Disabled	No User
Gi0/15	15-0	0	0	[illegible]	Admin Disabled	No User
Gi0/16	16-0	0	0	[illegible]	Admin Disabled	No User
Gi0/17	17-0	0	0	[illegible]	Admin Disabled	No User
Gi0/18	18-0	0	0	[illegible]	Admin Disabled	No User

Clicking the SESSION STATS tab brings up the 802.1X SESSION STATISTICS page, which displays 802.1x statistics information. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the port index.
Session ID	This parameter specifies the session identifier.
Received Frames	This parameter specifies the number of packets received.
Transmitted Frames	This parameter specifies the number of packets transmitted.
Session Time (secs)	This parameter specifies the session time in seconds.
Session Terminate Cause	This parameter specifies the reason for session termination.
User Name	This parameter specifies the name of the user authenticated.

802.1X Supplicant Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX01 EX02 EX03
AcerSwitch
Session Stats
Supp Session Stats
Mac Session Stats
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

802.1x Supplicant Session Statistics

Gi0/1-Ex0/3 |

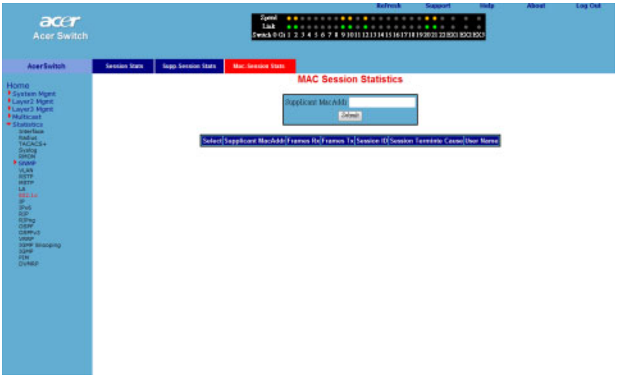
Port	Eapol FrRx	Eapol FrRx	Eapol Start FrTx	Eapol Logoff FrTx	Eapol RespId FrTx	Eapol Resp FrTx	Eapol ReqId FrRx	Eapol Req FrRx	Invalid Eapol FrRx	Eap LenErr FrRx	Last Eapol FrVersion	Last Eapol FrSource
Gi0/1	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/2	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/3	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/4	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/5	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/6	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/7	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/8	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/9	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/10	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/11	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/12	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/13	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/14	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/15	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/16	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/17	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/18	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/19	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/20	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/21	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00
Gi0/22	0	0	0	0	0	0	0	0	0	0	0	00:00:00:00:00:00

Clicking the SUPP SESSION STATS tab brings up the 802.1X SUPPLICANT SESSION STATISTICS page, which displays information about the 802.1x supplicant session. The parameters for this page are shown in the following table.

Parameter	Description
Port	This parameter specifies the port index.
Eapol FrRx	This parameter specifies the number of the EAPOL packets received.
Eapol FrTx	This parameter specifies the number of the EAPOL packets transmitted.
Eapol Start FrTx	This parameter specifies the number of the EAPOL start packet transmitted.
Eapol Logoff FrTx	This parameter specifies the number of the EAPOL logoff packet transmitted.
Eapol RespId FrTx	This parameter specifies the number of the EAPOL response identifier packet transmitted.

Parameter	Description
Eapol Resp FrTx	This parameter specifies the number of the EAPOL response packet frame transmitted.
Eapol ReqId FrRx	This parameter specifies the number of the EAPOL request identifier packet received.
Eapol Req FrRx	This parameter specifies the number of the EAPOL request frame receieved.
Invalid Eapol FrRx	This parameter specifies the number of the invalid EAPOL frame received.
Eap LenErr FrRx	This parameter specifies the number of EAPOL packets received with an invalid length.
Last Eapol FrVersion	This parameter specifies the version on the last EAPOL packet.
Last Eapol FrSource	This parameter specifies the source of the last EAPOL packet.

Mac Session Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch
AcerSwitch
Session Stats
Supp Session Stats
Mac Session Stats
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
Submit

MAC Session Statistics

Supplicant MacAddr

Select	Supplicant MacAddr	Frames Rx	Frames Tx	Session ID	Session Terminte Cause	User Name

Clicking the MAC SESSION STATS tab brings up the MAC SESSION STATISTICS page, which displays statistics information about 802.1x MAC sessions. The parameters for this page are shown in the following table.

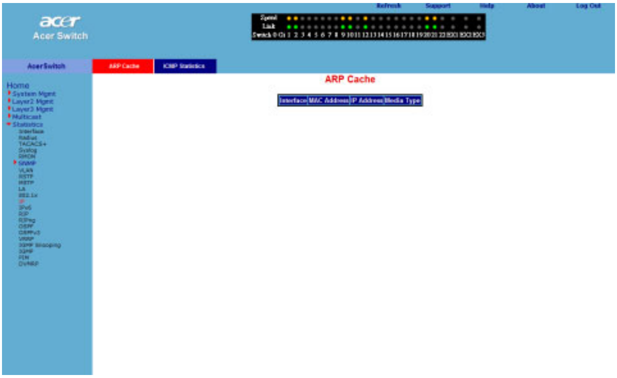
Parameter	Description
Supplicant MacAddr	This parameter specifies the supplicant MAC address.
Frames Rx	This parameter specifies the number of packets received.
Frames Tx	This parameter specifies the number of packets transmitted.
Session ID	This parameter specifies the session identifier.
Session Terminte Cause	This parameter specifies the reason for session termination.
User Name	This parameter specifies the name of user authenticated.

IP

The IP link allows you to view IP statistics through the following pages:

- “ARP Cache” on page 507
- “ICMP Statistics” on page 508

ARP Cache

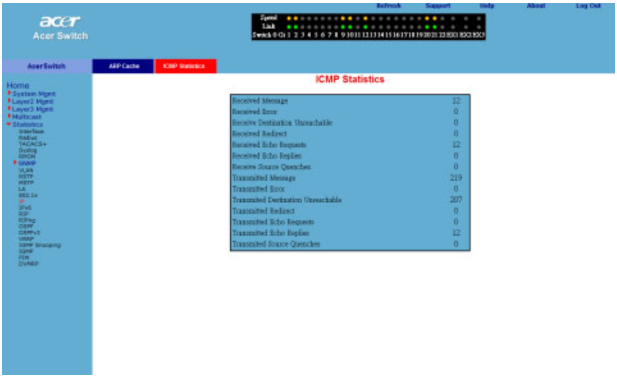

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
ARP Cache
ICMP Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP
ARP Cache

Interface	MAC Address	IP Address	Media Type

Clicking the ARP CACHE tab brings up the ARP CACHE page, which displays ARP entries. The parameters for this page are shown in the following table.

ICMP Statistics

Parameter	Description
Interface	This parameter specifies the interface from which this ARP entry is learned.
MAC Address	This parameter specifies the MAC address.
IP Address	This parameter specifies the IP address.
Media Type	This parameter specifies the static ARP or dynamic ARP.


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EXO1 EXO2 EXO3
AcerSwitch
ARP Cache
ICMP Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP

ICMP Statistics

Received Message	12
Received Error	0
Receive Destination Unreachable	0
Received Redirect	0
Received Echo Requests	12
Received Echo Replies	0
Receive Source Quenches	0
Transmitted Message	219
Transmitted Error	0
Transmitted Destination Unreachable	207
Transmitted Redirect	0
Transmitted Echo Requests	0
Transmitted Echo Replies	12
Transmitted Source Quenches	0

Clicking the ICMP STATISTICS tab brings up the ICMP STATISTICS page, which displays ICMP statistics information. The parameters for this page are shown in the following table.

Parameter	Description
Received Message	This parameter specifies the number of received messages.
Received Error	This parameter specifies the number of received errors.

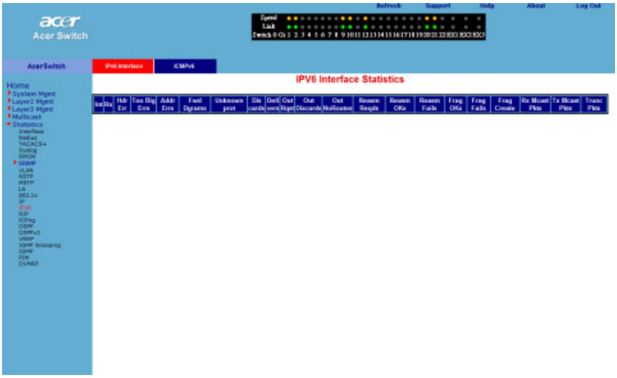
Parameter	Description
Receive Destination Unreachable	This parameter specifies the number of received destination unreachables.
Received Redirect	This parameter specifies the number of received redirects.
Received Echo Requests	This parameter specifies the number of echo requests..
Received Echo Replies	This parameter specifies the number of echo replies.
Receive Source Quenches	This parameter specifies the number of source quenches.
Transmitted Message	This parameter specifies the number of transmited messages.
Transmitted Error	This parameter specifies the number of transmitted errors.
Transmitted Destination Unreachable	This parameter specifies the number of transmitted destination unreachables.
Transmitted Redirect	This parameter specifies the number of transmitted redirects.
Transmitted Echo Requests	This parameter specifies the number of transmitted echo requests.
Transmitted Echo Replies	This parameter specifies the number of transmitted echo replies.
Transmited Source Quenches	This parameter specifies the number of transmitted source quenches.

IPv6

The IPv6 link allows you to view IPv6 statistics through the following pages:

- "IP V6 Interface Statistics" on page 510
- "ICMP V6 Statistics" on page 512

IP V6 Interface Statistics


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
IPv6 Interface
ICMPv6
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
DHCP
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

IPV6 Interface Statistics

Int	Rx	Hdr Err	Too Big Errs	Addr Errs	Fwd Dgrams	Unknown prot	Dis cards	Deli vers	Out Rqst	Out Discards	Out NoRoutes	Reasm Reqds	Reasm OKs	Reasm Fails	Frag OKs	Frag Fails	Frag Create	Rx Mcast Pkts	Tx Mcast Pkts	Trunc Pkts

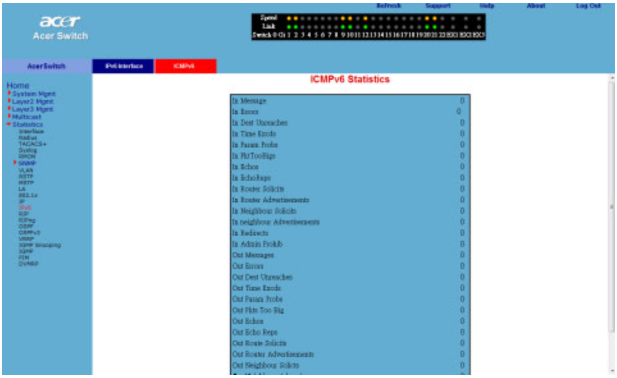
Clicking the IPV6 INTERFACE tab brings up the IPV6 INTERFACE STATISTICS page, which displays IPv6 port statistics. The parameters for this page are shown in the following table.

Parameter	Description
Interface	This parameter specifies the Port index.
Rcvd	This parameter specifies the number of IPv6 packets received.
Hdr Err	This parameter specifies the number of IPv6 packets received with header error.
Too Big Errs	This parameter specifies the number of too big IPv6 packets received.

Parameter	Description
Addr Errs	This parameter specifies the number of IPv6 packets received with address errors.
Fwd Dgrams	This parameter specifies the number of IPv6 datagrams forwarded in this port.
Unknown protos	This parameter specifies the number of packets received with unknown protocol.
Discdrs	This parameter specifies the number of received packets discarded due to errors.
Delivers	This parameter specifies the number of packets delivered.
Out Rqst	This parameter specifies the number of transmit requests.
Out Discards	This parameter specifies the number of transmit discards due to errors.
Out No Routes	This parameter specifies the number of packets to be transmitted but no routes.
Reasm Reqds	This parameter specifies the number of reassembly requests.
Reasm OKs	This parameter specifies the number or successful reassemblies.
Reasm Fails	This parameter specifies the number of reassemblies failed.
Frag OKs	This parameter specifies the number of good fragments received.
Frag Fails	This parameter specifies the number of fragments incompletely received.
Frag Creates	This parameter specifies the number of fragments created.
Rcvd Mcast Pkts	This parameter specifies the number of received IPv6 multicast packets.

Parameter	Description
Send Mcast Pkts	This parameter specifies the number of IPv6 multicast packets transmitted.
Trunctd Pkts	This parameter specifies the number of packets truncated.

ICMP V6 Statistics


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 XG1 XG2 XG3
AcerSwitch
IPv6 Interface
ICMPv6
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

ICMPv6 Statistics

In Message	0
In Errors	0
In Dest Unreaches	0
In Time Excds	0
In Param Probs	0
In PktTooBigs	0
In Echos	0
In EchoReps	0
In Router Solicits	0
In Router Advertisements	0
In Neighbour Solicits	0
In neighbour Advertisements	0
In Redirects	0
In Admin Prohib	0
Out Messages	0
Out Errors	0
Out Dest Unreaches	0
Out Time Excds	0
Out Param Probs	0
Out Pkts Too Big	0
Out Echos	0
Out Echo Reps	0
Out Route Solicits	0
Out Router Advertisements	0
Out Neighbour Solicts	0

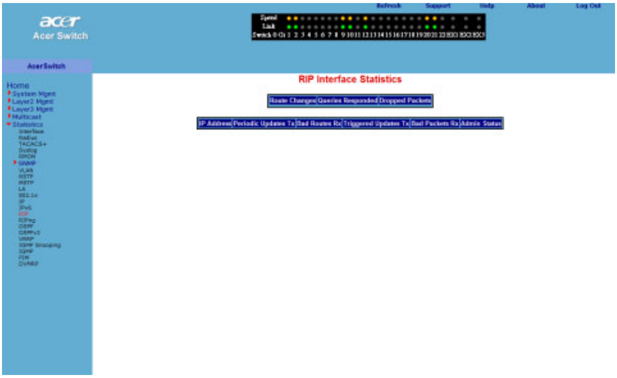
Clicking the ICMPv6 tab brings up the ICMPv6 STATISTICS page, which displays ICMPv6 statistics. The parameters for this page are shown in the following table.

Parameter	Description
In Message	This parameter specifies the number of messages received.
In Errors	This parameter specifies the number of messages received with errors.
In Dest Unreaches	This parameter specifies the number of destination unreachable messages received.

Parameter	Description
In Time Excds	This parameter specifies the number of receive timeouts.
In Param Probs	This parameter specifies the number of parameters probed.
In PktTooBigs	This parameter specifies the number of too big packets received.
In Echos	This parameter specifies the number of echo requests received.
In EchoReps	This parameter specifies the number of echo responses received.
In Router Solicits	This parameter specifies the number of received router solicits.
In Router Advertisements	This parameter specifies the number of routers advertisement received.
In Neighbor Solicits	This parameter specifies the number of received neighbor solicits.
In Neighbor Advertisements	This parameter specifies the number of received neighbor solicits.
In Redirects	This parameter specifies the number of redirect packets received.
In Admin Prohib	This parameter specifies the number of receive admin prohibted.
Out Messages	This parameter specifies the number of messages transmitted.
Out Errors	This parameter specifies the number of messages transmitted with errors.
Out Dest Unreaches	This parameter specifies the number of destination unreachable messages transmitted.
Out Time Excds	This parameter specifies the number of transmit timeouts.

Parameter	Description
Out Param Probs	This parameter specifies the number of parameters probed.
Out Pkts Too Big	This parameter specifies the number of too big packets transmitted.
Out Echos	This parameter specifies the number of echo requests transmitted.
Out Echo Reps	This parameter specifies the number of echo responses transmitted.
Out Route Solicits	This parameter specifies the number of transmitted router solicits.
Out Router Advertisements	This parameter specifies the number of transmitted neighbor solicits.
Out Neighbour Solicts	This parameter specifies the number of transmitted neighbor solicits.
Out Neighbour Advertisements	This parameter specifies the number of transmitted neighbor solicits.
Out Redirects	This parameter specifies the number of redirect packets transmitted.
Out Admin Prohib	This parameter specifies the number of transmit admin prohibted.
In Bad Code	This parameter specifies the number of bad code packets.

RIP Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EXO1 EXO2 EXO3
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

RIP Interface Statistics

Route Changes	Queries Responded	Dropped Packets

IP Address	Periodic Updates Tx	Bad Routes Rx	Triggered Updates Tx	Bad Packets Rx	Admin Status

Clicking the RIP link brings up the RIP INTERFACE STATISTICS page, which displays RIP statistics. The parameters for this page are shown in the following table.

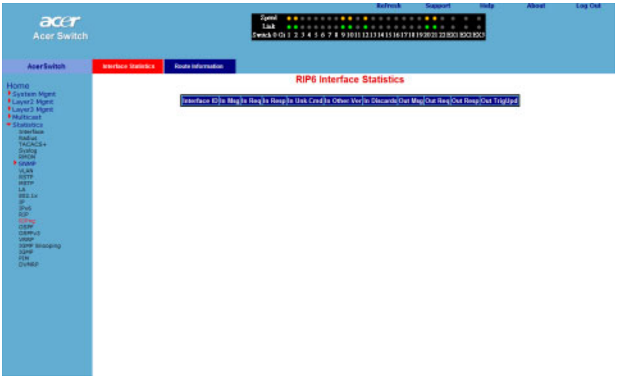
Parameter	Description
IP Address	This parameter specifies the IP address.
Received Bad Packets	This parameter specifies the number of received bad packets.
Received Bad Routes	This parameter specifies the number of received bad routes.
Transmitted Updates	This parameter specifies the the number of transmitted updates.

RIP6

The RIP6 link allows you to view RIP6 statistics through the following pages:

- “RIP6 Interface Statistics” on page 516
- “RIP6 Route Information” on page 517

RIP6 Interface Statistics


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Interface Statistics
Route Information
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

RIP6 Interface Statistics

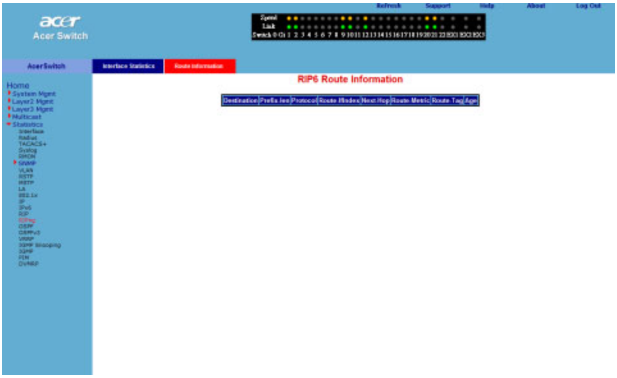
Interface ID	In Msg	In Req	In Resp	In Unk Cmd	In Other Ver	In Discards	Out Msg	Out Req	Out Resp	Out TrigUpd

Clicking the INTERFACE STATISTICS tab brings up the RIP6 INTERFACE STATISTICS page, which displays RIPng statistics. The parameters for this page are shown in the following table.

Parameter	Description
Interface ID	This parameter specifies the interface identifier.
In Msg	This parameter specifies the number of RIPng packets received.
In Req	This parameter specifies the number of RIPng request packets received.
In Resp	This parameter specifies the number of RIPng resonse packets received.

Parameter	Description
In Unk-Cmd	This parameter specifies the number of RIPng unknown command packets received.
In Other-Ver	This parameter specifies the number of RIPng other version packets received.
In Discards	This parameter specifies the number of received packets discarded.
Out Msg	This parameter specifies the number of RIPng packets transmitted.
Out Req	This parameter specifies the number of RIPng request packets transmitted.
Out Resp	This parameter specifies the number of RIPng response packets transmitted.
Out TrigUpd	This parameter specifies the number of RIPng triggered updates transmitted.

RIP6 Route Information


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Interface Statistics
Route Information
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

RIP6 Route Information

Destination	Prefix len	Protocol	Route IfIndex	Next Hop	Route Metric	Route Tag	Age

Clicking the ROUTE INFORMATION tab brings up the RIP6 ROUTE INFORMATION page, which displays information about RIPng routes. The parameters for this page are shown in the following table.

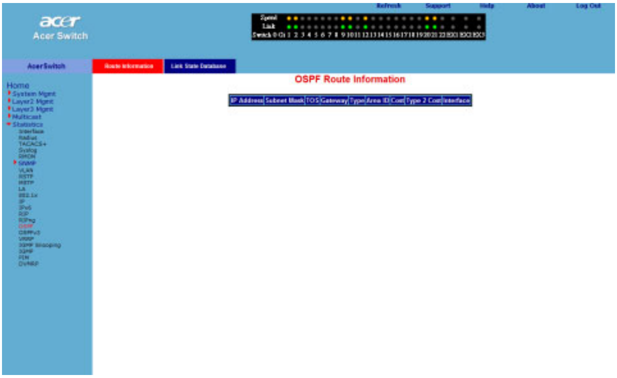
Parameter	Description
Destination	This parameter specifies the route destination.
Prefix-len	This parameter specifies the length of the route prefix.
Protocol	This parameter specifies the routing protocol
Route-IfIndex	This parameter specifies the interface index.
Next-Hop	This parameter specifies the next hop for this route.
Route-Metric	This parameter specifies the metric of this route.
Route-Tag	This parameter specifies the route tag identifier.
Age	This parameter specifies the route age in seconds.

OSPF

The OSPF link allows you to view OSPF statistics through the following pages:

- “OSPF Route Information” on page 519
- “OSPF Link State DB” on page 520

OSPF Route Information


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Route Information
Link State Database
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
OSPF
OSPFv3
VRRP
PIM
DVMRP

OSPF Route Information

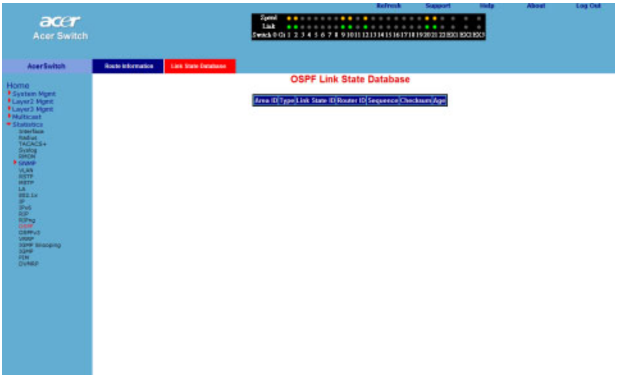
IP Address	Subnet Mask	TOS	Gateway	Type	Area ID	Cost	Type 2 Cost	Interface

Clicking the ROUTE INFORMATION tab brings up the OSPF ROUTE INFORMATION page, which displays information about OSPF routes. The parameters for this page are shown in the following table.

Parameter	Description
IP Address	This parameter specifies the IP address.
Subnet Mask	This parameter specifies the Subnet Mask.
TOS	This parameter specifies the TOS.
Gateway	This parameter specifies the gateway.
Type	This parameter specifies the type.
Area ID	This parameter specifies the Area ID.

Parameter	Description
Cost	This parameter specifies the cost.
Type 2 Cost	This parameter specifies the Type 2 cost.
Interface	This parameter specifies the interface.

OSPF Link State DB


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Route Information
Link State Database
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

OSPF Link State Database

Area ID	Type	Link State ID	Router ID	Sequence	Checksum	Age

Clicking the LINK STATE DATABASE tab brings up the OSPF LINK STATE DATABASE page, which displays information about OSPF link state database. The parameters for this page are shown in the following table.

Parameter	Description
Area ID	This parameter specifies the area identifier.
Type	This parameter specifies the link state type.
Link State ID	This parameter specifies the link state identifier.
Router ID	This parameter specifies the router identifer.

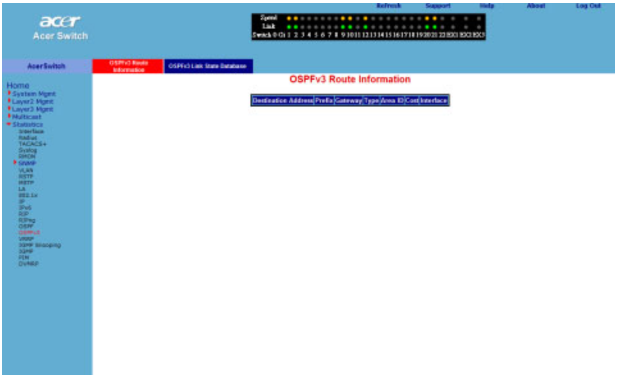
Parameter	Description
Sequence	This parameter specifies the sequence number of this link state information.
Checksum	This parameter specifies the checksum.
Age	This parameter specifies the link state information age in seconds.

OSPFv3

The OSPFv3 link allows you to view OSPFv3 statistics through the following pages:

- "OSPFV3 Route Information" on page 521
- "OSPFV3 Link State DB" on page 522

OSPFV3 Route Information


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch
AcerSwitch
OSPFv3 Route Information
OSPFv3 Link State Database
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA

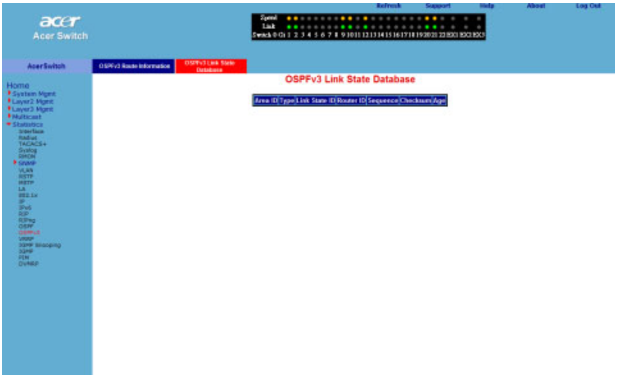
OSPFv3 Route Information

Destination Address	Prefix	Gateway	Type	Area ID	Cost	Interface

Clicking the OSPFV3 ROUTE INFORMATION tab brings up the OSPFV3 ROUTE INFORMATION page, which displays information about OSPFV3 routes. The parameters for this page are shown in the following table.

Parameter	Description
Destination Address	This parameter specifies the destination address.
Prefix	This parameter specifies the prefix.
Gateway	This parameter specifies the gateway.
Type	This parameter specifies the type.
Area ID	This parameter specifies the Area ID.
Cost	This parameter specifies the cost.
Interface	This parameter specifies the interface.

OSPFV3 Link State DB


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
OSPFv3 Route Information
OSPFv3 Link State Database
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

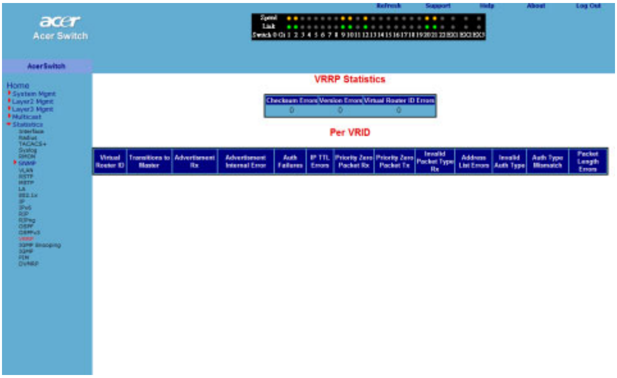
OSPFv3 Link State Database

Area ID	Type	Link State ID	Router ID	Sequence	Checksum	Age

Clicking the OSPFV3 LINK STATE DATABASE tab brings up the OSPFV3 LINK STATE DATABASE page, which displays information about OSPF link state database. The parameters for this page are shown in the following table.

Parameter	Description
Area ID	This parameter specifies the area identifier.
Type	This parameter specifies the link state type.
Link State ID	This parameter specifies the link state identifier.
Router ID	This parameter specifies the router identifier.
Sequence	This parameter specifies the sequence number of this link state information.
Checksum	This parameter specifies the checksum.
Age	This parameter specifies the link state information age in seconds.

VRRP Statistics


Refresh
Support
Help
About
Log Out
Acer Switch
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

VRRP Statistics

Checksum Errors	Version Errors	Virtual Router ID Errors
0	0	0

Per VRID

Virtual Router ID	Transitions to Master	Advertisement Rx	Advertisement Internal Error	Auth Failures	IP TTL Errors	Priority Zero Packet Rx	Priority Zero Packet Tx	Invalid Packet Type Rx	Address List Errors	Invalid Auth Type	Auth Type Mismatch	Packet Length Errors

Clicking the VRRP link brings up the VRRP STATISTICS page, which displays VRRP global statistics and VRRP router specific statistics. The parameters for this page are shown in the following table.

Parameter	Description
VRRP Global Statistics	
Checksum Errors	This parameter specifies the number of checksum errors.
Version Errors	This parameter specifies the number of version errors.
Virtual Router ID Errors	This parameter specifies the number of Virtual Router ID errors.
VRRP Router Specific Statistics	
Virtual Router ID	This parameter specifies the Virtual Router identifier.
Transitions to Master	This parameter specifies the number of transitions as Master.
Advertisment Receive	This parameter specifies the number of advertisement packets received.
Advertisment Internal Error	This parameter specifies the number of advertisement errors happened.
Authentication Failures	This parameter specifies the number of authentication failures.
IP TTL Errors	This parameter specifies the number of IP TTL errors happened.
Priority Zero Packet Received	This parameter specifies the number of priority zero packets received.
Priority Zero Packet Transmited	This parameter specifies the number of priority zero packets transmitted.
Invalid Packet Type Received	This parameter specifies the number of invalid packets received.
Address List Errors	This parameter specifies the number of address list errors.
Invalid Authentication Type	This parameter specifies the number of invalid authentication types received.

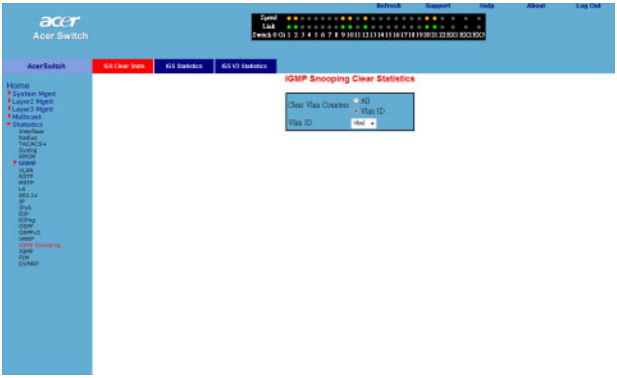
Parameter	Description
Authentication Type Mismatch	This parameter specifies the number of authentication type mismatch received.
Packet Length Errors	This parameter specifies the number of VRRP packets received with invalid length.

IGMP Snooping

The IGMP link allows you to view IGMP statistics through the following pages:

- "IGMP Snooping Clear Statistics" on page 525
- "IGMP Snooping V1/V2 Statistics" on page 526
- "IGMP Snooping V3 Statistics" on page 528

IGMP Snooping Clear Statistics


Refresh
Support
Help
About
Log Out
Acer Switch
AcerSwitch
IGS Clear Stats
IGS Statistics
IGS V3 Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

IGMP Snooping Clear Statistics

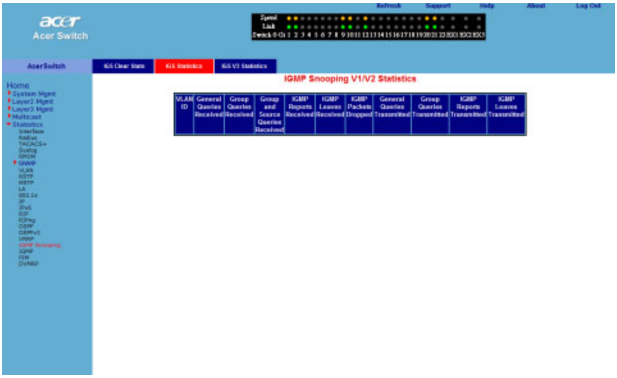
Clear Vlan Counters ○ All ● Vlan ID

Vlan ID Vlan1

Clicking the IGS CLEAR STATS tab brings up the IGMP SNOOPING CLEAR STATISTICS page, which displays clearing IGMP snooping statistics. The parameters for this page are shown in the following table.

Parameter	Description
All	This parameter gives you the option to clear all the IGMP statistics.
Vlan ID	This parameter give you the option to clear IGMP statistics for a particular VLAN.

IGMP Snooping V1/V2 Statistics


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 XG1 XG2 XG3
AcerSwitch
IGS Clear Stats
IGS Statistics
IGS V3 Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

IGMP Snooping V1/V2 Statistics

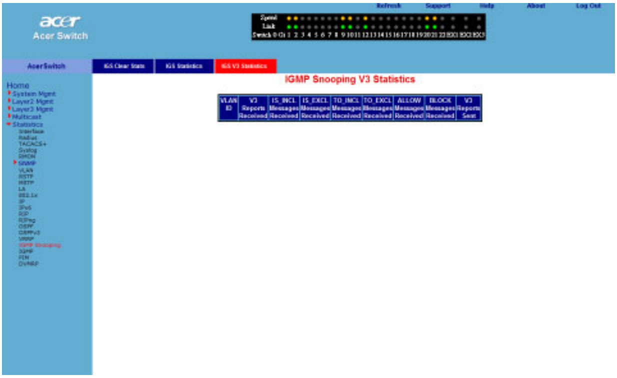
VLAN ID	General Queries Received	Group Queries Received	Group and Source Queries Received	IGMP Reports Received	IGMP Leaves Received	IGMP Packets Dropped	General Queries Transmitted	Group Queries Transmitted	IGMP Reports Transmitted	IGMP Leaves Transmitted

Clicking the IGS STATISTICS tab brings up the IGMP SNOOPING V1/V2 STATISTICS page, which displays IGMP snooping statistics. The parameters for this page are shown in the following table.

Parameter	Description
VLAN ID	This parameter specifies the VLAN identifier.
General Queries Received	This parameter specifies the number of general guery packets received.

Parameter	Description
Group Queries Received	This parameter specifies the number of group query packets received.
Group and Source Queries Received	This parameter specifies the number of group and source query packets received.
IGMP Reports Received	This parameter specifies the number of IGMP report packets received.
IGMP Leaves Received	This parameter specifies the number of IGMP leave packets received.
IGMP Packets Dropped	This parameter specifies the number of IGMP dackets dropped.
General Queries Transmitted	This parameter specifies the number of general query packets transmitted.
Group Queries Transmitted	This parameter specifies the number of group query packets transmitted.
IGMP Reports Transmitted	This parameter specifies the number of IGMP report packets transmitted.
IGMP Leaves Transmitted	This parameter specifies the number of IGMP leave packets transmitted.

IGMP Snooping V3 Statistics


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
AcerSwitch
IGS Clear Stats
IGS Statistics
IGS V3 Statistics
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics

IGMP Snooping V3 Statistics

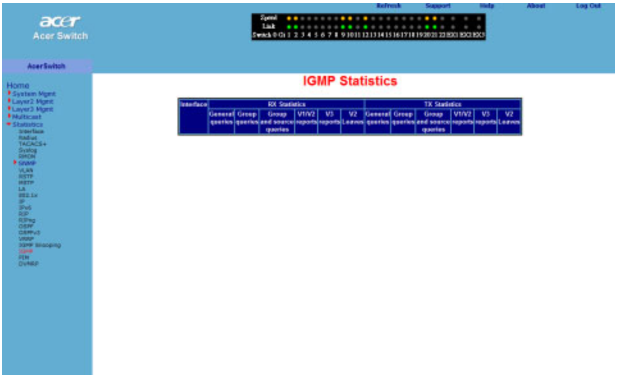
VLAN ID	V3 Reports Received	IS_INCL Messages Received	IS_EXCL Messages Received	TO_INCL Messages Received	TO_EXCL Messages Received	ALLOW Messages Received	BLOCK Messages Received	V3 Reports Sent

Clicking the IGS V3 STATISTICS tab brings up the IGMP SNOOPING V3 STATISTICS page, which displays IGMP snooping V3 statistics information. The parameters for this page are shown in the following table.

Parameter	Description
VLAN ID	This parameter specifies the VLAN identifier.
V3 Reports Received	This parameter specifies the number of Reports messages received.
IS_INCL Messages Received	This parameter specifies the number of messages received with is include field.
IS_EXCL Messages Received	This parameter specifies the number of messages received with is exclude field.
TO_INCL Messages Received	This parameter specifies the number of messages received with to include field.
TO_EXCL Messages Received	This parameter specifies the number of messages received with to exclude field.

Parameter	Description
ALLOW Messages Received	This parameter specifies the number of allow messages received.
BLOCK Messages Received	This parameter specifies the number of block messages received.
V3 Reports Sent	This parameter specifies the number of V3 reports transmitted.

IGMP Statistics


acer
Acer Switch
Refresh
Support
Help
About
Log Out
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

IGMP Statistics

Interface	RX Statistics						TX Statistics					
	General queries	Group queries	Group and source queries	V1/V2 reports	V3 reports	V2 Leaves	General queries	Group queries	Group and source queries	V1/V2 reports	V3 reports	V2 Leaves

Clicking the IGMP link brings up the IGMP ROUTE STATISTICS page, which displays IGMP route information. The parameters for this page are shown in the following table.

Parameter	Description
Interface	This parameter specifies the interface identifier.
General Queries Received	This parameter specifies the number of general guery packets received.
Group Queries Received	This parameter specifies the number of group query packets received.

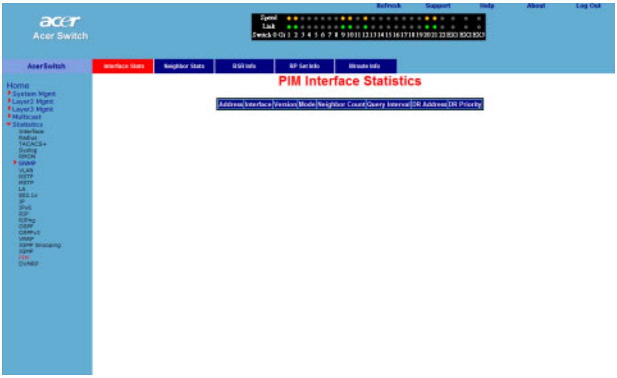
Parameter	Description
Group and Source Queries Received	This parameter specifies the number of group and source query packets received.
IGMP V1/V2 Reports Received	This parameter specifies the number of IGMP V1/V2 report packets received.
IGMP V3 Reports Received	This parameter specifies the number of IGMP V3 report packets received.
General Queries Transmitted	This parameter specifies the number of general query packets transmitted.
Group Queries Transmitted	This parameter specifies the number of group query packets transmitted.
Group and Source Queries Transmitted	This parameter specifies the number of group and source query packets transmitted.

PIM

The PIM link allows you to view PIM statistics through the following pages:

- “PIM Interface Statistics” on page 531
- “PIM Neighbor Statistics” on page 532
- “PIM BSR Info” on page 533
- “PIM RP Set Information” on page 534
- “PIM Route Information” on page 535

PIM Interface Statistics

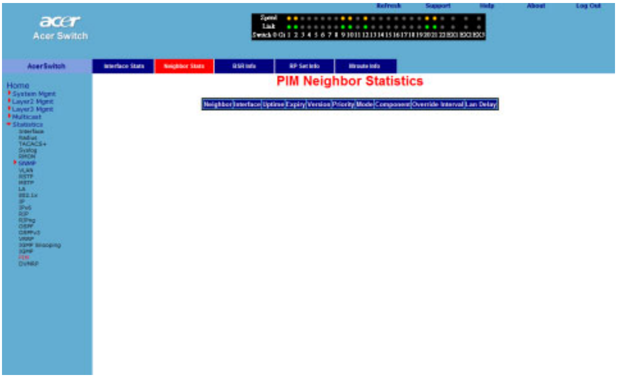

Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 BX1 BX2 BX3
AcerSwitch
Interface Stats
Neighbor Stats
BSR Info
RP Set Info
Mroute Info
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
PIM Interface Statistics
Address
Interface
Version
Mode
Neighbor Count
Query Interval
DR Address
DR Priority

Clicking the INTERFACE STATS tab brings up the PIM INTERFACE STATISTICS page, which displays PIM interface statistics. The parameters for this page are shown in the following table.

Parameter	Description
Address	This parameter specifies the address.
Interface	This parameter specifies the interface.
Version	This parameter specifies the version.
Mode	This parameter specifies the mode.

Parameter	Description
Neighbor Count	This parameter specifies the neighbor count.
Query Interval	This parameter specifies the query interval.
DR address	This parameter specifies the DR address.
DR Priority	This parameter specifies the DR priority.

PIM Neighbor Statistics


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Interface Stats
Neighbor Stats
BSR Info
RP Set Info
Mroute Info
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

PIM Neighbor Statistics

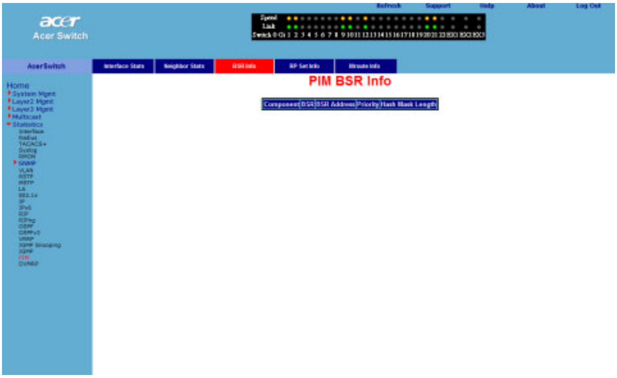
Neighbor	Interface	Uptime	Expiry	Version	Priority	Mode	Component	Override Interval	Lan Delay

Clicking the NEIGHBOR STATS tab brings up the PIM NEIGHBOR STATISTICS page, which displays PIM neighbor statistics. The parameters for this page are shown in the following table.

Parameter	Description
Neighbor	This parameter specifies the neighbor.
Interface	This parameter specifies the interface.
Uptime	This parameter specifies the uptime.

Parameter	Description
Expiry	This parameter specifies the expiry.
Version	This parameter specifies the version.
Priority	This parameter specifies the priority.
Mode	This parameter specifies the mode.
Component	This parameter specifies the component.
Override Interval	This parameter specifies the override interval.
LAN Delay	This parameter specifies the LAN delay.

PIM BSR Info


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Interface Stats
Neighbor Stats
BSR Info
RP Set Info
Mroute Info
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
PIM BSR Info

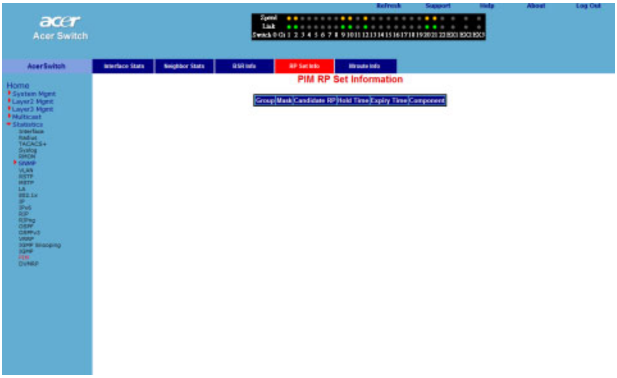
Component	BSR	BSR Address	Priority	Hash Mask Length

Clicking the BSR INFO tab brings up the PIM BSR INFO page. The parameters for this page are shown in the following table.

Parameter	Description
Component	This parameter specifies the component.

Parameter	Description
BSR	This parameter specifies the BSR.
BSR Address	This parameter specifies the BSR address.
Priority	This parameter specifies the priority.
Hash Mask Length	This parameter specifies the Hash Mask Length.

PIM RP Set Information


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 EX1 EX2 EX3
AcerSwitch
Interface Stats
Neighbor Stats
BSR Info
RP Set Info
Mroute Info
PIM RP Set Information
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA

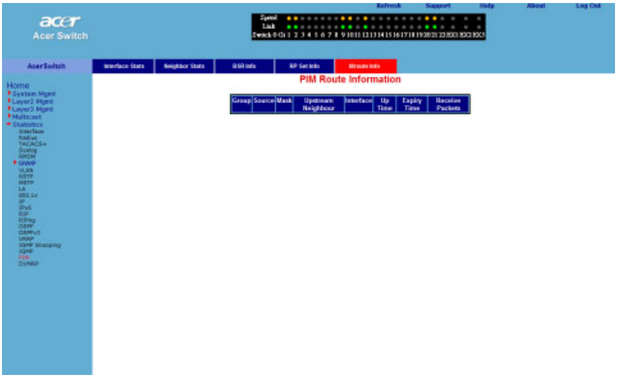
Group	Mask	Candidate RP	Hold Time	Expiry Time	Component

Clicking the RP SET INFO tab brings up the PIM RP INFORMATION page, which displays PIM RP information. The parameters for this page are shown in the following table.

Parameter	Description
Group	This parameter specifies the group address.
Mask	This parameter specifies the mask.
Candidate RP	This parameter specifies the candidate RP.

Parameter	Description
Hold Time	This parameter specifies the Hold time in seconds.
Expiry Time	This parameter specifies the expiry time in seconds.
Component	This parameter specifies the component identifier.

PIM Route Information


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
AcerSwitch
Interface Stats
Neighbor Stats
BSR Info
RP Set Info
Mroute Info
PIM Route Information
Group
Source
Mask
Upstream Neighbour
Interface
Up Time
Expiry Time
Receive Packets
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x

Clicking the MROUTE INFO tab brings up the PIM ROUTE INFORMATION page, which displays PIM route information. The parameters for this page are shown in the following table.

Parameter	Description
Group	This parameter specifies the group address.
Source	This parameter specifies the source address.
Mask	This parameter specifies the PIM route mask.
Upstream Neighbor	This parameter specifies the upstream neighbor address.

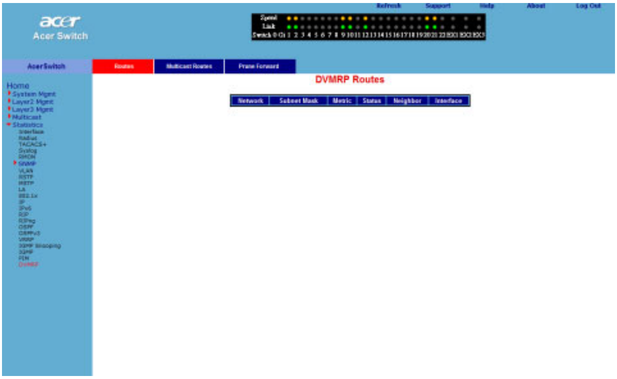
Parameter	Description
Interface	This parameter specifies the
Up Time	This parameter specifies the up time in seconds.
Expiry Time	This parameter specifies the expiry time in seconds.
Receive Packets	This parameter specifies the number of packets received.

DVMRP

The DVMRP link allows you to view DVMRP statistics through the following pages:

- "DVMRP Routers" on page 537
- "DVMRP Multicast Routers" on page 538
- "DVMRP Prune Statistics" on page 539

DVMRP Routers


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
Switch 0 Gi 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 XG1 XG2 XG3
AcerSwitch
Routes
Multicast Routes
Prune Forward
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP
DVMRP Routes

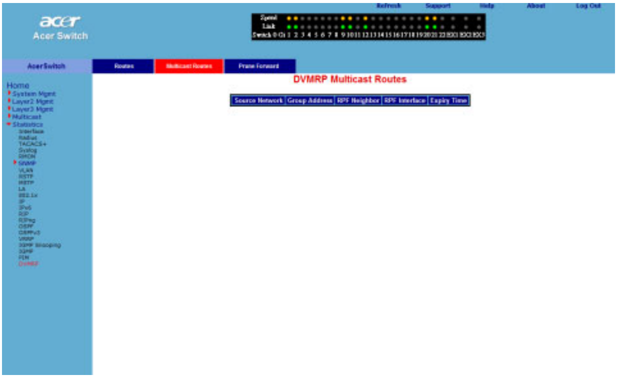
Network	Subnet Mask	Metric	Status	Neighbor	Interface

Clicking the Routes tab brings up the DVMRP Routes page, which displays DVMRP routes information. The parameters for this page are shown in the following table.

Parameter	Description
Network	This parameter specifies the network address for this route.
Subnet Mask	This parameter specifies the network mask for this route.
Metric	This parameter specifies the metric value for this route.
Status	This parameter specifies the status of this route.

Parameter	Description
Neighbor	This parameter specifies the neighbor address for this route.
Interface	This parameter specifies the interface identifier.

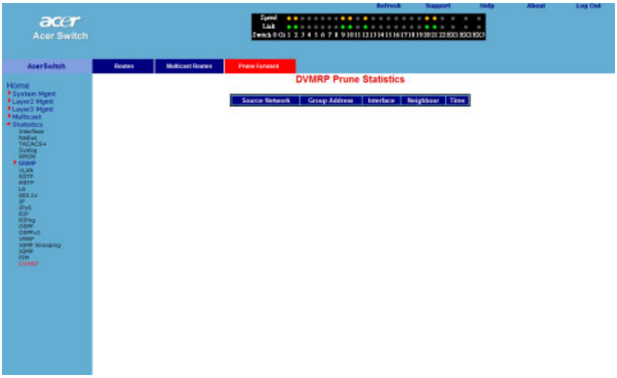
DVMRP Multicast Routers


Refresh
Support
Help
About
Log Out
acer
Acer Switch
Speed
Link
AcerSwitch
Routes
Multicast Routes
Prune Forward
DVMRP Multicast Routes
Source Network
Group Address
RPF Neighbor
RPF Interface
Expiry Time
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA

Clicking the MULTICAST ROUTES tab brings up the DVMRP MULTICAST ROUTES page, which displays DVMRP multicast routes information. The parameters for this page are shown in the following table.

Parameter	Description
Source Network	This parameter specifies the source network.
Group Address	This parameter specifies the group address.
RPF Neighbor	This parameter specifies the RPF neighbor.
RPF Interface	This parameter specifies the RPF interface.
Expiry Time	This parameter specifies the expiry time in seconds.

DVMRP Prune Statistics


Refresh
Support
Help
About
Log Out
Acer Switch
Speed
Link
AcerSwitch
Routes
Multicast Routes
Prune Forward
DVMRP Prune Statistics
Source Network
Group Address
Interface
Neighbour
Time
Home
System Mgmt
Layer2 Mgmt
Layer3 Mgmt
Multicast
Statistics
Interface
Radius
TACACS+
Syslog
RMON
SNMP
VLAN
RSTP
MSTP
LA
802.1x
IP
IPv6
RIP
RIPng
OSPF
OSPFv3
VRRP
IGMP Snooping
IGMP
PIM
DVMRP

Clicking the PRUNE FORWARD tab brings up the DVMRP PRUNE STATISTICS page, which DVMRP prune statistics information. The parameters for this page are shown in the following table.

Parameter	Description
Source Network Address	This parameter specifies the source network address.
Group Address	This parameter specifies the group address.
Interface Identifier.	This parameter specifies the interface identifier.
Neighbor Address	This parameter specifies the neighbor address.
Time	This parameter specifies the time in seconds.

Firmware Upgrading Procedures

The procedures for firmware upgrading and using a fallback firmware image are listed below.

Upgrading Firmware on the Switch using TFTP:

To upgrade the switch's firmware, use the procedure below.

1. Copy the latest firmware to the TFTP root directory on the TFTP server machine.
2. Make sure the upgraded TFTP server and switch both have network reach ability.
3. Login to the Switch CLI, either through Telnet or a serial console port.
4. Type the below command to upgrade the firmware in the normal area:

   ```
   firmware upgrade tftp://<ip-address>/<filename>
   flash:normal
   ```

   Here *<ip-address>* is the IP address of the TFTP server and *<filename>* is the name of the firmware image file.
5. On successful download CLI displays the below string:

   ```
   Firmware download completed successfully.
   ```
6. After a successful download, reboot the switch to use this latest firmware.
7. If the download fails, check the IP address, file name, network connections and configurations to reach the TFTP server.
8. If the switch does not come up after the firmware upgrade due to any incorrect firmware images, boot the switch using a fallback firmware image. Refer the steps in the procedure "Booting using a Fallback Firmware Image:" below to boot the switch using a fallback firmware image.
9. Once the switch is booted with a fallback firmware, repeat the above steps to upgrade with the correct firmware image.

On successful upgrade of the latest firmware, it is advised that you upgrade the fallback firmware image also. Follow the steps listed in the procedure "Upgrading Fallback Firmware using TFTP:" below to upgrade the fallback firmware image.*Accessing the Switch Firmware through the Web-based Management Utility*

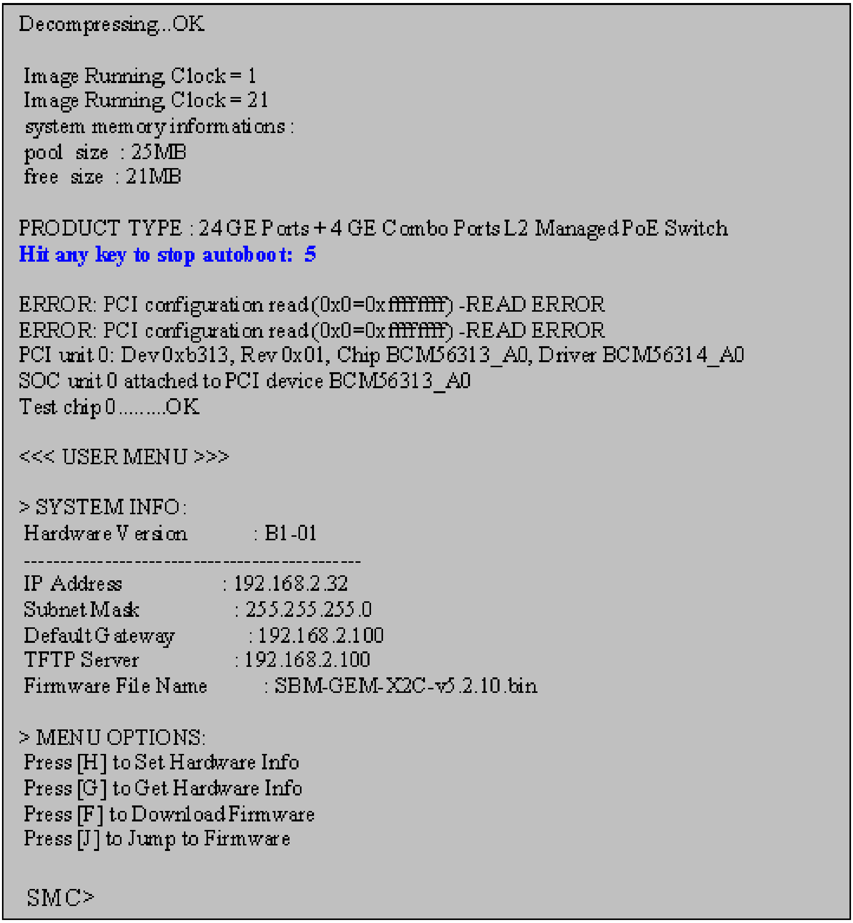
1. Enter the IP address of the switch into the address bar of your browser and hit <ENTER>.
2. On the next screen, click on the SYSTEM link on the list on the left. The window to the right shows you the current firmware version and provides an UPGRADE link.
3. Click on the UPGRADE link to update your firmware. A Rescue ROM socket is also included on the PCB that allows you to reinstall the firmware with a pluggable chip.
4.

Booting using a Fallback Firmware Image:

Use the procedure below to boot using a fallback firmware image.

1. Reboot the switch by power cycling the switch power.
2. During reboot, press any key when it displays the below text (as shown).

```
Hit any key to stop autoboot: 5
```

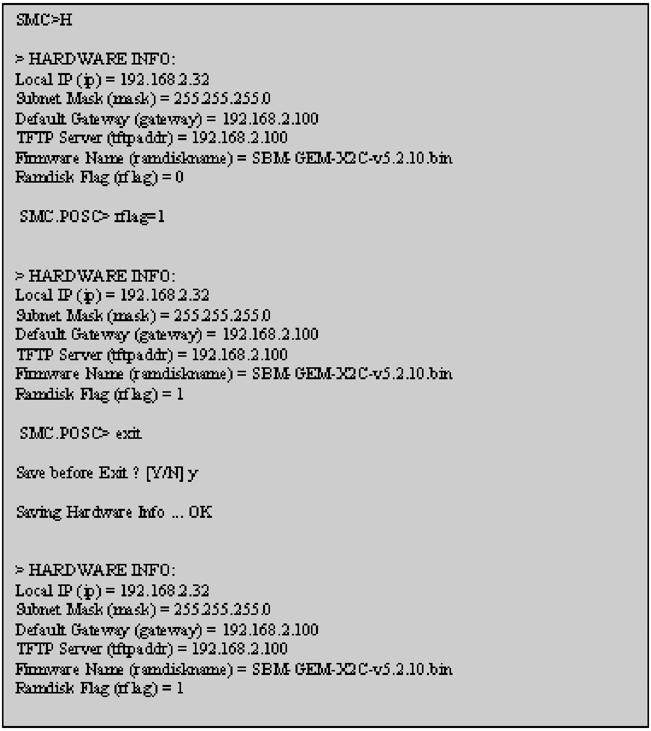


```
Decompressing..OK

 Image Running Clock = 1
 Image Running Clock = 21
 system memory informations :
 pool  size  : 25MB
 free  size  : 21MB

PRODUCT TYPE : 24 GE Ports + 4 GE Combo Ports L2 Managed PoE Switch
Hit any key to stop autoboot:  5

ERROR: PCI configuration read(0x0=0xffffffff) -READ ERROR
ERROR: PCI configuration read(0x0=0xffffffff) -READ ERROR
PCI unit 0: Dev 0xb313, Rev 0x01, Chip BCM56313_A0, Driver BCM56314_A0
SOC unit 0 attached to PCI device BCM56313_A0
Test chip 0.........OK

<<< USER MENU >>>

> SYSTEM INFO:
 Hardware Version          : B1-01
 ---------------------------------------------
 IP Address               : 192.168.2.32
 Subnet Mask               : 255.255.255.0
 Default Gateway            : 192.168.2.100
 TFTP Server               : 192.168.2.100
 Firmware File Name          : SBM-GEM-X2C-v5.2.10.bin

> MENU OPTIONS:
 Press [H] to Set Hardware Info
 Press [G] to Get Hardware Info
 Press [F] to Download Firmware
 Press [J] to Jump to Firmware

 SMC>
```

Note: The numbers in the Product Type entry change depending upon the switch you are using.

3. Once the boot sequence is interrupted, it will display menuoptions as shown in.

Use the "H" option to set hardware information by typing the character **H**. This will display the hardware information that can be changed as shown in.



```
SMC>H

> HARDWARE INFO:
Local IP (ip) = 192.168.2.32
Subnet Mask (mask) = 255.255.255.0
Default Gateway (gateway) = 192.168.2.100
TFTP Server (tftpaddr) = 192.168.2.100
Firmware Name (ramdiskname) = SBM-GEM-X2C-v5.2.10.bin
Ramdisk Flag (rflag) = 0

 SMC.POSC> rflag=1


> HARDWARE INFO:
Local IP (ip) = 192.168.2.32
Subnet Mask (mask) = 255.255.255.0
Default Gateway (gateway) = 192.168.2.100
TFTP Server (tftpaddr) = 192.168.2.100
Firmware Name (ramdiskname) = SBM-GEM-X2C-v5.2.10.bin
Ramdisk Flag (rflag) = 1

 SMC.POSC> exit

Save before Exit ? [Y/N] y

Saving Hardware Info ... OK


> HARDWARE INFO:
Local IP (ip) = 192.168.2.32
Subnet Mask (mask) = 255.255.255.0
Default Gateway (gateway) = 192.168.2.100
TFTP Server (tftpaddr) = 192.168.2.100
Firmware Name (ramdiskname) = SBM-GEM-X2C-v5.2.10.bin
Ramdisk Flag (rflag) = 1
```

4. To choose the boot from a fallback image, type the command: `rflag=1`
5. Type *Save* to save the hardware information.
6. Type *Exit* to exit the hardware information menu.
7. Type **J** to boot the image. In this case it will boot from a fallback image.
8. In case you wish to later move back to a normal image, repeat the above the steps with one difference for step 4, where you should use the command `rflag=0` *instead* of `rflag=1` to boot with a normal firmware image.

Upgrading Fallback Firmware using TFTP:

To upgrade fallback firmware using TFTP, use the procedure below.

1. Copy the latest firmware to the TFTP root directory on the TFTP server machine.
2. Make sure the upgraded TFTP server and switch both have network reach ability.
3. Login to the Switch CLI either through Telnet or a serial console port.
4. Type the below command to upgrade the firmware in the normal area:

   ```
   firmware upgrade tftp://<ip-address>/<filename> flash:fallbackl
   ```

   Here *<ip-address>* is the IP address of the TFTP server and *<filename>* is the name of the firmware image file.
5. On a successful download, the CLI displays the below string:

   ```
   Firmware download completed successfully.
   ```
6. After a successful download, reboot the switch using the fallback image to verify the fallback image. Refer the steps listed above in the procedure "Booting using a Fallback Firmware Image:" above to boot the switch in the fallback image.
7. Once both the normal and fallback image both have latest firmware, continue to use the normal image as directed in step 8 of the procedure "Booting using a Fallback Firmware Image:".

Firmware Failure Recovery Steps

In case you have any issues in booting the switch with either a normal or fallback image, use the procedure below to recover the switch functionality with a correctly working firmware image.

Recovering Switch Functionality with a Firmware Image:

1. Copy the latest firmware to the TFTP root directory on a TFTP server machine.
2. Make sure the upgraded TFTP server and switch both have network reach ability.

1. Reboot the switch by power cycling the switch power.
2. During reboot, press any key when it displays the below text.

```
Hit any key to stop autoboot: 5
```

3. Once the boot sequence is interrupted, it will display menu options.Use the "H" option to set hardware information by typing the character **H**.

   This will display the hardware information that can be changed.

4. Configure the IP address for this switch (only for booting purposes) using the command: `ip=<IP address>`

   For example **ip=192.168.2.3**

5. Configure the subnet mask for this switch IP address using the below command:

   ```
   mask=<subnet mask>
   ```

   For example **mask=255.255.255.0**

6. Configure the TFTP server IP address using the below command:

   ```
   tftpaddr=<TFTP server IP>
   ```

   For example **tftpaddr=192.168.2.100**

7. Configure the gateway address to reach the TFTP server using the below command if the TFTP server is in different network:

   ```
   gateway=<gateway IP>
   ```

   For example **gateway=192.168.2.100**

8. Configure the firmware image file name using the below command:

   ```
   ramdiskname=<filename>
   ```

   For example **ramdiskname= SBM-GEM-X2C-v5.2.10.bin**

9. Type *Save* to save the hardware information.

10. Type *Exit* to exit the hardware information menu.

11. Type **F** to download the firmware image. In this case it will download to the normal image area.

12. On a successful download, the switch displays the below string.

    ```
    Updating the ramdisk image ...
    This may take awhile
    OK
    ```

13. After a successful download, boot the switch to use this latest firmware by typing **J**.

14. If the download fails, check the IP address, file name, network connections and configurations to reach the TFTP server.

InfiniBand Modules

Overview

InfiniBand is a switch-based, point-to-point bidirectional serial link network communications architecture. Acer offers three different Infiniband modules:

- 4X QDR (40 Gb/s) switch with 20 internal ports and up to 16 external QSFP ports (3 models).

The main function of the AB7000 InifiniBand switch modules is to provide high-speed interconnectivity among the blade modules and with external peripherals. These are hot-pluggable modules that must be installed in a double-wide at the lower right or top right of the enclosure.

Note: For any blade to access the InfiniBand module, it must first have an InfiniBand card installed on its mainboard. See "Appendix A: Troubleshooting" on page 581 for details on the Mezzanine HCA cards that are available for use with the InfiniBand module.

Installation and Configuration of InfiniBand Switch Modules

This section covers the installation, removal and configuration of InfiniBand switch modules and InfiniBand pass-through modules.

Installing/Removing the InfiniBand Switch Module

Before installing the InfiniBand switch module make sure the cover to the module has been installed before proceeding. Refer to the anti-static precautions described in "Electrostatic discharge precautions" on page vii.

The InifiniBand switch module must be installed into a double-wide bay. Assuming that you have already created a double-wide bay out of two single-wide bays, continue with the steps below. See "Double-Wide Modules" on page 87 for details on setting up double-wide bays in the AB7000 enclosure.

Note: The 10GbE module also requires the same double-wide bay as the InfiniBand switch module and may be installed instead of the InfiniBand switch module in your blade enclosure system. Use the same instructions below for installing either the pass-through module or the InfiniBand switch module.

Installing the Module

1. Remove the dummy cover from the bay you want to place the module in.
2. Place the module's release handle in the open position.
3. Slide the module into the module bay until it stops.
4. Push the release handle to the closed position.

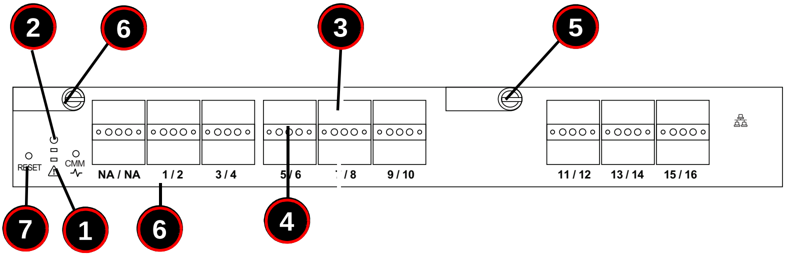
After the module has been installed and the handle locked, it will power on after a short delay and a POST test will run to verify it is working properly.

Removing the Module

1. Pull out the release handle to the open position.
2. Pull the module out of the bay.
3. Replace immediately with another module or with a dummy module cover to maintain airflow integrity.

Acer 4X QDR InfiniBand Switch Module

Figure 4-224. InfiniBand Switch Module



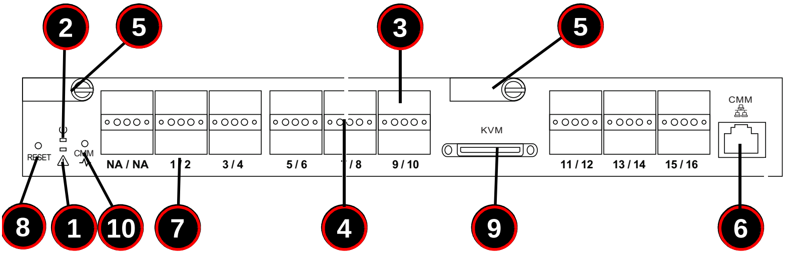
Item	Description
1	System error. Fault LED (Red)[1]
2	System status. Ready LED (Green)[2]
3	External InfiniBand Port (16 QSFP ports for Q3636 and 18 QSFP ports for Q3618)
4	Per Port Dual-color LED, PHY link(Green)/Logic link(Amber)/ACT blinking(Green+Amber)
5	Module Release Handle
6	Port Numbers (First port number is top port, second port number is bottom port)
7	QDR Switch Reset Button

[1] If the fault LED goes on, the QDR switch operation is stopped. It then needs a hardware reset or a power off cycle to bring it back into normal operation.

[2] If the Green LED is blinking, the QDR switch is overheated. Please check the air fan and vent condition. If the fault LED goes on at the same time, a hard reset or a power off cycle needs to be initiated.

Acer 4X QDR InfiniBand Switch Module with Integrated CMM

Figure 4-225. SBM-IBS-Q3616M InfiniBand Switch Module



Item	Description
1	System error. Fault LED (Red)[1]
2	System status. Ready LED (Green)[2]
3	External InfiniBand Port (16 QSFP ports for Q3636 and 18 QSFP ports for Q3618)
4	Per Port Dual-color LED, PHY link(Green)/Logic link(Amber)/ACT blinking(Green+Amber)
5	Module Release Handle
6	Internal CMM Module Ethernet Port
7	Port Numbers (First port number is top port, second port number is bottom port)
8	QDR Switch Reset and CMM Load Default
9	KVM Connector
10	CMM Activity LED

[1] If the fault LED goes on, the QDR switch operation is stopped. It then needs a hardware reset or a power off cycle to bring it back into normal operation.

[2] If the Green LED is blinking, the QDR switch is overheated. Please check the air fan and vent condition. If the fault LED goes on at the same time, a hard reset or a power off cycle needs to be initiated.

Feature	Description
Internal/External Ports	Internal: 20 4X QDR copper ports/ External: 16 4X QDR copper ports
Bandwidth	4X QDR (40 Gbps) non-blocking architecture for 2.88 Tbps total bandwidth (36-port)

The module includes an integrated Chassis Management Module (CMM) installed as an add-on-module inside the switch chassis. This allows installation of two (redundant) switches in the AB7000 enclosure without the loss of system management capability. Note that a dual-port InfiniBand Add-On-Card is required if redundant switches are installed.

Either the RJ45 connector or the KVM connector on the front of the module can be used to connect to the integrated CMM module (see Figure 4-225). There is also an activity indicator LED for the CMM on the left-hand side of the front of the module.

The reset button (lower left), pushed once, will reset the module. If held down for approximately 5 seconds it will send a signal to the CMM, which cause the CMM to return to default settings.

See Chapter 4, Section 4.1 of the *AB7000 User's Manual* for more information on the operation of the CMM itself, including instructions on how to use both the KVM and RJ45 connections.

InfiniBand Switch LEDs

SBM-IBS-Q3616/M InfiniBand switch module LEDs are found below in the following table.

LED	State	Indication Description
Module Status LED	Blink	Switch is booting its firmware
	Steady On	Boot process failed
	Off	Switch is properly booted and operational

LED	State	Indication Description
Module Power LED (Green)	Steady On	Switch has power and is operational
	Off	There is a problem with the power being supplied to the switch.
Port Physical Link LED (Green)	Steady On	Physical link established
	Blink	Physical link error, poor connection quality
	Off	Port is off or has no physical connection
Port Activity LED (Yellow)	Steady On	Logic link established, no activity
	Blinking	Data transferring to/from the port
	Off	Logical link is down

Configuring the InfiniBand Switch Module

Maintenance and configuration of the InfiniBand module within a Windows OS is performed with Mellanox's® WinOB™ software package. WinOB allows you to upgrade the firmware and monitor temperature, voltages, port utilization and other switch parameters.

In a Linux environment, maintenance and configuration of the InfiniBand module is performed with the OFED (OpenFabrics Enterprise Distribution).

Both software packages are available to download on Mellanox's web site:

- http://www.mellanox.com/content/pages.php?pg=software_overview_ib&menu_section=34

5 Acer Smart Blade Manager

Acer Smart Blade Manager

Introduction

Acer Smart Blade Manager sends messages to and from the CMM (Chassis Management Module). Messages are encapsulated in an RMCP+ (Remote Management Control Protocol) packet that follows the IPMI standard.

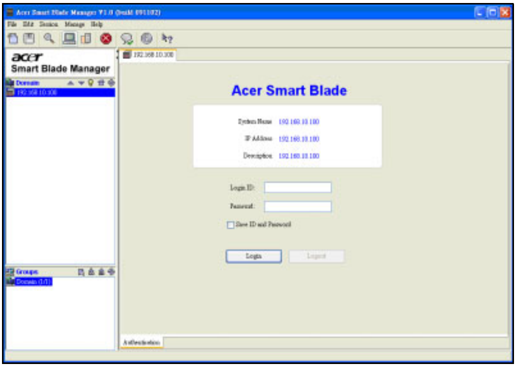
Acer Smart Blade Manager monitors and reports on the status of multiple blade systems, including the server blades, power supplies, Ethernet switches, InfiniBand switches and CMM modules. The information is presented visually for easy management and is useful for monitoring the status of each blade system. The application supports remote KVM and Virtual Media.

In the Acer Smart Blade Manager device list you will see the Acer Blade Server icon for each CMM added. Double-click the icon to open the login screen.

1 Enter your username in the Login ID text box.

2 Enter your Password and click **Login**.

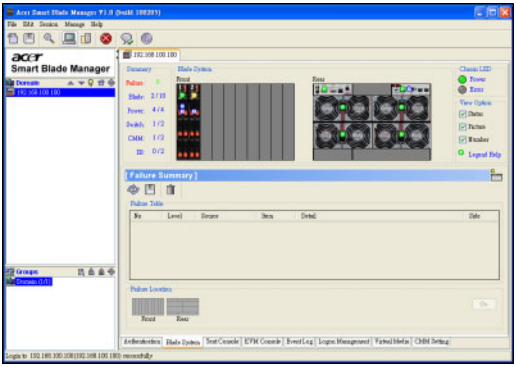
Note: The default username is **root** and the password is **superuser**


File
Edit
Session
Manage
Help
acer
Smart Blade Manager
Domain
Groups
Acer Smart Blade
Login ID:
Password:
☐ Save ID and Password
Login
Logout
Authentication

System Name 192.168.10.100
IP Address 192.168.10.100
Description 192.168.10.100

Blade System tab

Once you log in successfully, you will be redirected to the Blade System tab. This is the main Acer Blade Server management User Interface.

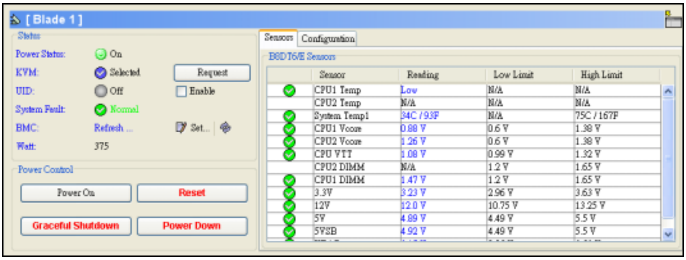


The upper part of the window displays the status of all blade systems being monitored. Any changes to a server will be reflected in this view. For example, if someone removes blade system 1, you will see the blade 1 icon disappear (become grayed out). If you turn off blade system 10, the power indicator for blade 10 will become amber.

Since different types of blade systems can be used in the same blade server, the icon will appear different for different module types. In this way, the Blade System View offers a real-time picture of the blade server.

Each icon can be clicked on to show a detailed list of functions in the Blade System tab in the bottom part of the window. Additional summary items can be viewed as here well. The Blade System tab allows you to view more information and send additional commands to the blade systems.

The Blade System tab has a detach button at the upper-right of the window. Click on it to detach the UI as a standalone window that is useful for continual monitoring of a specific blade system.

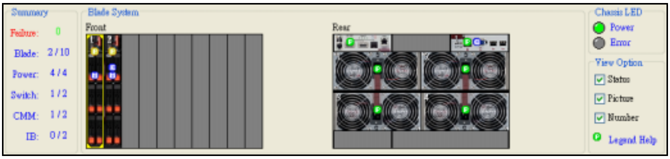

[Blade 1]
Status
Request
Set...
Power Control
Power On
Reset
Graceful Shutdown
Power Down
Sensors
Configuration
B8DT6/E Sensors

Power Status: On
KVM: Selected
UID: Off
☐ Enable
System Fault: Normal
BMC: Refresh ...
Watt: 375

	Sensor	Reading	Low Limit	High Limit
✓	CPU1 Temp	Low	N/A	N/A
	CPU2 Temp	N/A	N/A	N/A
✓	System Temp1	34C / 93F	N/A	75C / 167F
✓	CPU1 Vcore	0.88 V	0.6 V	1.38 V
✓	CPU2 Vcore	1.26 V	0.6 V	1.38 V
✓	CPU VTT	1.08 V	0.99 V	1.32 V
	CPU2 DIMM	N/A	1.2 V	1.65 V
✓	CPU1 DIMM	1.47 V	1.2 V	1.65 V
✓	3.3V	3.23 V	2.96 V	3.63 V
✓	12V	12.0 V	10.75 V	13.25 V
✓	5V	4.89 V	4.49 V	5.5 V
✓	5VSB	4.92 V	4.49 V	5.5 V

Blade System

The Blade System View provides an overview of the blade server.


Summary
Blade System
Front
Rear
Chassis LED
Power
Error
View Option
Legend Help

Failure: 0
Blade: 2 / 10
Power: 4 / 4
Switch: 1 / 2
CMM: 1 / 2
IB: 0 / 2

☑ Status
☑ Picture
☑ Number

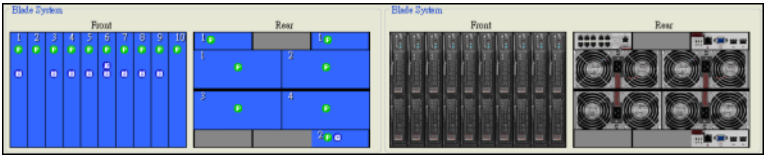
There are four sections in the Blade System View:

Summary: Shows a summary of failures and the number of each module type installed. The failure, blade, power and switch items are shown in greater detail in the Blade System tab.

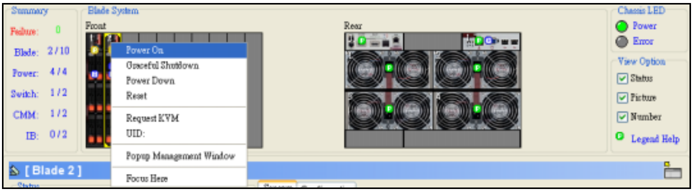
Blade System: Shows both front and rear images of the blade system. The front view shows blade system status while the rear view shows the status of the power supply, Acer switch, InfiniBand and CMM. A yellow border indicates which module is currently selected. Each module picture shows the current status of the blade system using one or more symbols. Click **Legend Help** to determine the meaning of a symbol.

Chassis LED: Indicates the power and error LEDs for the blade server. The power LED shows the current power status. The error LED indicates that the system is over-heating or a fan has failed. Click **Legend Help** to determine the meaning of an indicator.

View Option: Allows you to show or hide the module status, picture and number. The different views are shown below.


Blade System
Front
Rear
1
2
3
4
5
6
7
8
9
10
Blade System
Front
Rear

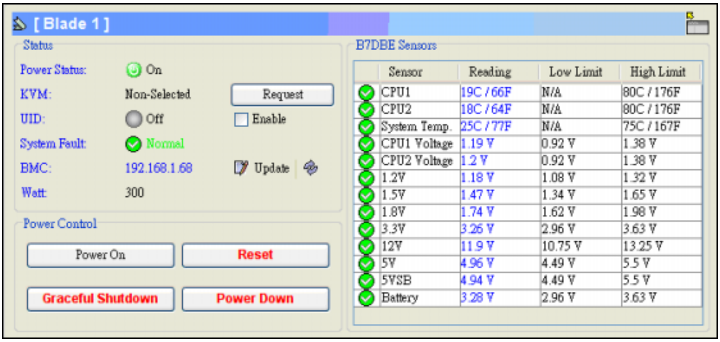
Right-click on a blade system picture to open a popup window to perform certain actions and power, ID and KVM functions.


Summary
Blade System
Front
Rear
Chassis LED
Power
Error
View Option
☑ Status
☑ Picture
☑ Number
Legend Help
Power On
Graceful Shutdown
Power Down
Reset
Request KVM
UID:
Popup Management Window
Focus Here
[Blade 2]

Failure: 0
Blade: 2 / 10
Power: 4 / 4
Switch: 1 / 2
CMM: 1 / 2
IB: 0 / 2

Blade

Select a blade system to open the Blade UI in the Blade System tab section at the bottom of the screen.


[Blade 1]
Status
Request
Update
Power Control
Power On
Reset
Graceful Shutdown
Power Down
B7DBE Sensors

Power Status: On
KVM: Non-Selected
UID: Off ☐ Enable
System Fault: Normal
BMC: 192.168.1.68
Watt: 300

	Sensor	Reading	Low Limit	High Limit
✓	CPU1	19C / 66F	N/A	80C / 176F
✓	CPU2	18C / 64F	N/A	80C / 176F
✓	System Temp.	25C / 77F	N/A	75C / 167F
✓	CPU1 Voltage	1.19 V	0.92 V	1.38 V
✓	CPU2 Voltage	1.2 V	0.92 V	1.38 V
✓	1.2V	1.18 V	1.08 V	1.32 V
✓	1.5V	1.47 V	1.34 V	1.65 V
✓	1.8V	1.74 V	1.62 V	1.98 V
✓	3.3V	3.26 V	2.96 V	3.63 V
✓	12V	11.9 V	10.75 V	13.25 V
✓	5V	4.96 V	4.49 V	5.5 V
✓	5VSB	4.94 V	4.49 V	5.5 V
✓	Battery	3.28 V	2.96 V	3.63 V

Status

Power Status: Shows the current power status.

KVM: Shows whether KVM is selected or not. Click **Request** to request KVM on this blade.

ID: Shows the status of the ID LED. Check **Enable** to enable the ID. Once enabled, the ID LED on the blade panel will flash.

System Fault: Indicates the system fault status.

BMC: Shows BMC status. If a BMC module is installed, the BMC IP address will appear here. Use **Update** to update the BMC IP. Click ⟳ to reload the BMC IP. If BMC is not installed *not installed* appears and the buttons are disabled.

Watt: The estimated power consumption (wattage) of the blade. It is a static value supplied by BIOS.

Power Control

Power On: Click to power on the blade.

Reset: Click to reset the blade.

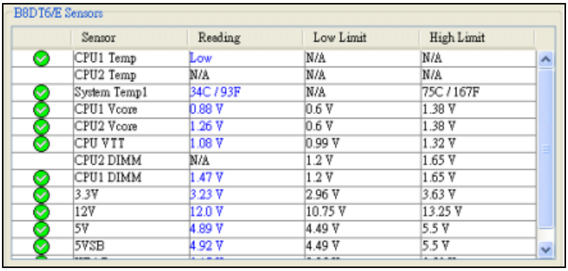
Graceful Shutdown: Click to perform a graceful shutdown on the blade.

Power Down: Click to power down the blade.

Sensors

This section displays the motherboard identifier for easy reference. The sensor table shows the CPU(s), system temperature and voltages of the selected blade system.

The table headers indicate the status, sensor name, reading and the low and high limits. If the status of a sensor is normal, the reading will be in blue and the sensor will have an OK symbol. If a sensor status is out of range, the reading will be red and the sensor will have a fail symbol. If the sensor is not present the reading will be N/A.

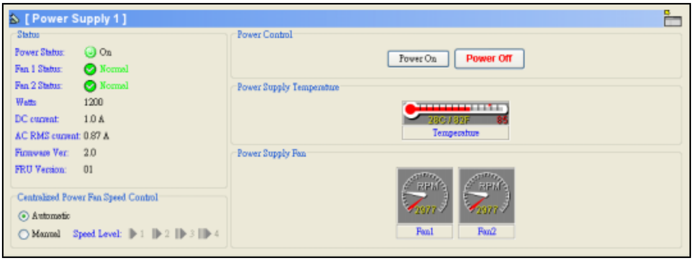


B8DT6/E Sensors

	Sensor	Reading	Low Limit	High Limit
✓	CPU1 Temp	Low	N/A	N/A
	CPU2 Temp	N/A	N/A	N/A
✓	System Temp1	34C / 93F	N/A	75C / 167F
✓	CPU1 Vcore	0.88 V	0.6 V	1.38 V
✓	CPU2 Vcore	1.26 V	0.6 V	1.38 V
✓	CPU VTT	1.08 V	0.99 V	1.32 V
	CPU2 DIMM	N/A	1.2 V	1.65 V
✓	CPU1 DIMM	1.47 V	1.2 V	1.65 V
✓	3.3V	3.23 V	2.96 V	3.63 V
✓	12V	12.0 V	10.75 V	13.25 V
✓	5V	4.89 V	4.49 V	5.5 V
✓	5VSB	4.92 V	4.49 V	5.5 V

Power Supply

Select a power supply module to display the Power Supply UI in the Blade System tab area. This UI includes the following:


[Power Supply 1]
Status
Power Control
Power On
Power Off
Power Supply Temperature
28C / 82F
85
Temperature
Power Supply Fan
RPM
2977
Fan1
Fan2
Centralized Power Fan Speed Control
Speed Level:
1
2
3
4

Power Status: On
Fan 1 Status: Normal
Fan 2 Status: Normal
Watts: 1200
DC current: 1.0 A
AC RMS current: 0.87 A
Firmware Ver: 2.0
FRU Version: 01

● Automatic
○ Manual

Status

Power Status: Shows the current power status.

Fan 1 Status: Shows the status of power supply fan 1 as normal or abnormal.

Fan 2 Status: Shows the status of power supply fan 2 as normal or abnormal.

Watts: Shows total wattage provided by this power supply.

DC current: Shows the DC current. (Only supported for 1400 W power supplies.)

AC RMS current: Shows the AC RMS current. (Only supported for 1400 W power supplies.)

Firmware Ver: Shows the power supply's firmware version.

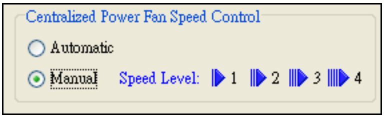
FRU Version: Shows the power supply's FRU version.

Centralized Power Fan Speed Control

Centralized Power Fan Speed Control is used to manage all power supply fans in the blade server. The default is automatic fan speed control. When in automatic mode, the CMM will monitor the system load and optimize all fan speeds accordingly.

Manual speed fan control mode allows you to manually adjust the speed of the power supply fans by clicking one of the arrow icons. Set to minimum speed by clicking the icon numbered **1** and to maximum speed by clicking the icon numbered **4**. The icons numbered **2** and **3** are for incremental increases between the minimum and maximum settings. After changing the fan speed, you should see the fan rpm change on the status screen.

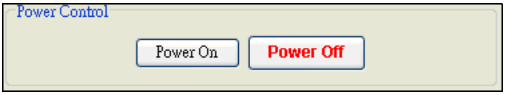
Note: These settings affect all fans simultaneously; you cannot control the speed of individual fans.


Centralized Power Fan Speed Control
○ Automatic
● Manual
Speed Level: 1 2 3 4

Power Control

Power On: Click to turn on the power supply.

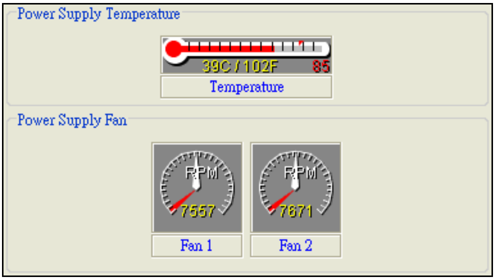
Power Off: Click to turn off the power supply.


Power Control
Power On
Power Off

Power Supply Temperature and Power Supply Fan

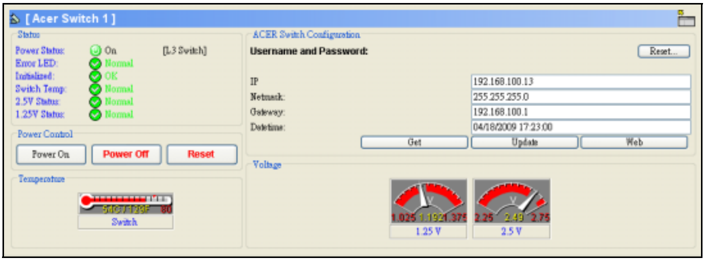
Displays the current power supply temperature and fan RPM.

Note: When one power supply is off, its fans will be driven by the other power supply.


Power Supply Temperature
39C / 102F
85
Temperature
Power Supply Fan
RPM
7557
Fan 1
RPM
7671
Fan 2

Acer switch

Click an Acer switch module to display the Acer switch UI.


[Acer Switch 1]
Status
Power Control
Power On
Power Off
Reset
Temperature
54C / 129F
80
Switch
ACER Switch Configuration
Reset...
Get
Update
Web
Voltage
1.025
1.192
1.375
1.25 V
2.25
2.49
2.75
2.5 V

Power Status: On [L3 Switch]
Error LED: Normal
Initialized: OK
Switch Temp: Normal
2.5V Status: Normal
1.25V Status: Normal

Username and Password:
IP 192.168.100.13
Netmask: 255.255.255.0
Gateway: 192.168.100.1
Datetime: 04/18/2009 17:23:00

Status

Power Status: Shows the current power status of the selected Acer switch.

Error LED: Indicates an Acer switch error.

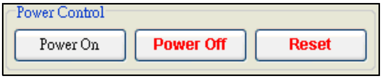
Initialized: Indicates that the Acer switch has been initialized.

Switch Temp: Shows the Acer switch temperature status.

2.5V Status: Shows the status of the 2.5 voltage level.

1.25V Status: Shows status of the 1.25 voltage level.

Power Control

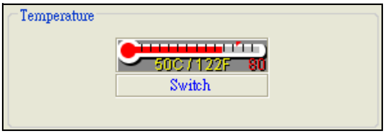

Power Control
Power On
Power Off
Reset

Power On: Turn on the Acer switch.

Power Off: Turn off the Acer switch.

Reset: Reset the Acer switch.

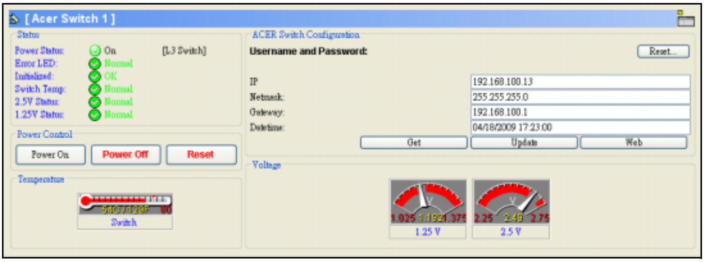
Temperature


Temperature
50C / 122F
80
Switch

Shows the current Acer switch temperature.

Acer Switch Configuration

Acer switch configuration is a web interface used to manage the Acer switch. For more details, please refer to the Acer switch manual. With Acer switch configuration you can set the Acer switch data.


[Acer Switch 1]

Status

Power Status: On [L3 Switch]
Error LED: Normal
Initialized: OK
Switch Temp: Normal
2.5V Status: Normal
1.25V Status: Normal

ACER Switch Configuration

Username and Password:

IP 192.168.100.13
Netmask: 255.255.255.0
Gateway: 192.168.100.1
Datetime: 04/18/2009 17:23:00

Reset...
Get
Update
Web
Power Control
Power On
Power Off
Reset
Temperature
54C / 129F
80
Switch
Voltage
1.025
1.192
1.375
1.25 V
2.25
2.49
2.75
2.5 V

IP: The IP address of the Acer switch configuration web engine.

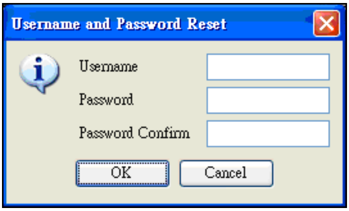
Netmask: Netmask address of the Acer switch.

Acer: Acer address of the Acer switch.

Datetime: Date and time settings for the Acer switch.

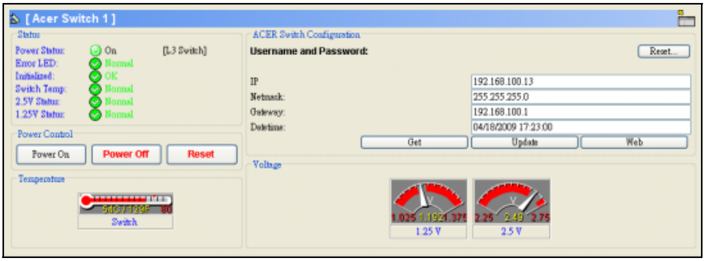
Click **Get** to immediately reload the Acer switch settings. Click **Update** to apply any address changes to the Acer switch. Click **Web** to open a browser linked directly to the IP.

Click **Reset...** to reset the username and password. Enter the **Username**, **Password** and **Password Confirm** then click **OK** to apply the change to the Acer switch.


Username and Password Reset
Username
Password
Password Confirm
OK
Cancel

Note: This only resets the username and password; it does not affect the Acer switch login to Acer Smart Blade Manager.

The gigabit Pass Thru module has same UI as the Acer switch, excluding Acer switch configuration and Error LED. They share the same position in the Acer Blade Server enclosure.


[Acer Switch 1]

Status

Power Status: On [L3 Switch]
Error LED: Normal
Initialized: OK
Switch Temp: Normal
2.5V Status: Normal
1.25V Status: Normal

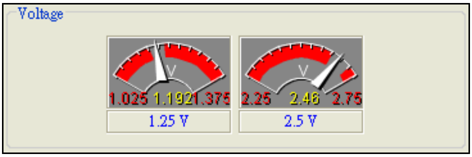
ACER Switch Configuration

Username and Password:

IP 192.168.100.13
Netmask: 255.255.255.0
Gateway: 192.168.100.1
Datetime: 04/18/2009 17:23:00

Reset...
Power Control
Power On
Power Off
Reset
Get
Update
Web
Temperature
54C / 129F
80
Switch
Voltage
V
1.025
1.192
1.375
1.25 V
V
2.25
2.49
2.75
2.5 V

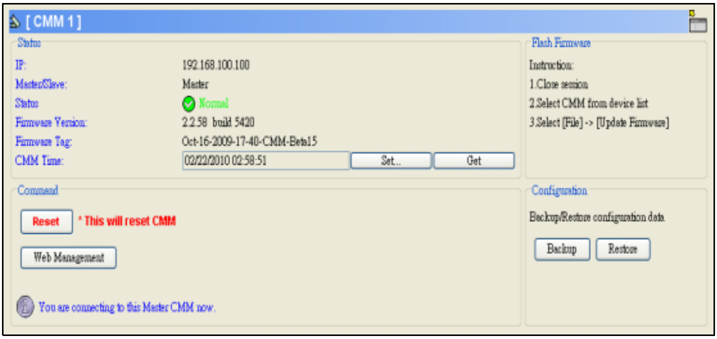
Voltage


Voltage
V
1.025
1.192
1.375
1.25 V
V
2.25
2.46
2.75
2.5 V

Shows the current Acer switch voltage levels for the 1.25 V and 2.5 V voltages.

CMM

Select one of the CMM modules to open the CMM UI.



IP: 192.168.100.100

Master/Slave: Master

Status: Normal

Firmware Version: 2.2.58 build 5420

Firmware Tag: Oct-16-2009-17-40-CMM-Beta15

CMM Time: 02/22/2010 02:58:51

Instruction:
1.Close session
2.Select CMM from device list
3.Select [File] -> [Update Firmware]

* This will reset CMM

Backup/Restore configuration data

You are connecting to this Master CMM now.

Status

IP: Shows the CMM IP address.

Master/Slave: Shows the CMM master/slave status. A master CMM has full management of the blade server. A slave CMM is a backup to the master CMM.

Status: Shows the CMM status.

Firmware Version: Shows the CMM firmware version.

Firmware Tag: Shows the CMM firmware tag.

CMM Time: Shows the CMM time. The CMM time shown in the text field may not match the current time. Click **Get** to reload the CMM time immediately. Click **Set** to set the CMM time. See the next section for more details on setting CMM time.

Setting CMM time

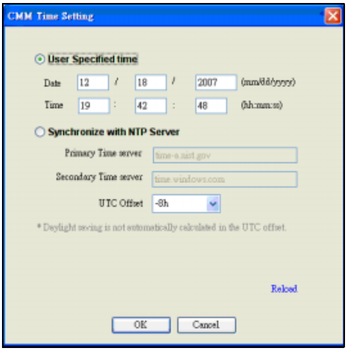
There are two ways to set the CMM time: You may specify the time or synchronize with NTP (Network Time Protocol) server time.

User Specific Time allows you to enter time values for the CMM internal real-time clock.

Synchronizing with the NTP Server allows your CMM real-time clock to obtain time information from an NTP server. Enter the IP address for the primary or secondary NTP server.

UTC Offset allows you to offset the UTC timer.

Note: The time cannot automatically be adjusted for daylight saving time. You will need to manually adjust the UTC offset twice a year to compensate for daylight saving time.



CMM Time Setting

● User Specified time

Date 12 / 18 / 2007 (mm/dd/yyyy)

Time 19 : 42 : 48 (hh:mm:ss)

○ Synchronize with NTP Server

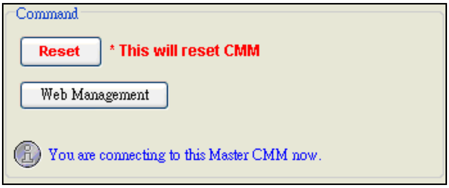
Primary Time server time-a.nist.gov

Secondary Time server time.windows.com

UTC Offset -8h

* Daylight saving is not automatically calculated in the UTC offset.

Command



Command

* This will reset CMM

You are connecting to this Master CMM now.

Reset: Click to reset the CMM. Once clicked, Acer Smart Blade Manager will automatically close the session.

Web Management: Click to open a browser that is linked to the CMM web interface.

CMM type: Shows if the current CMM is the master or slave.

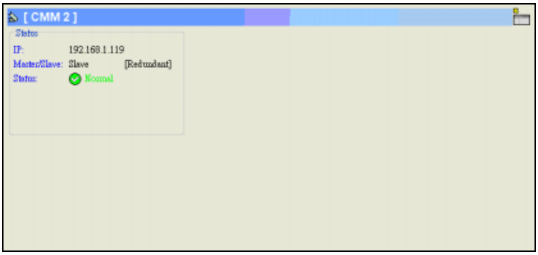
Flash Firmware

Shows the steps needed to flash the firmware.

Note: The CMM web interface also provides the flash firmware function.

Slave CMM

Selecting the Slave CMM gives you less information on the CMM. Only IP, Master/Slave and Status information is shown.


[CMM 2]
Status

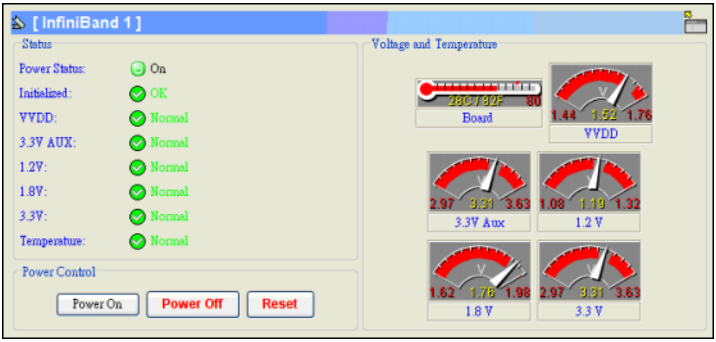
IP: 192.168.1.119

Master/Slave: Slave [Redundant]

Status: Normal

InfiniBand

Selecting one of InfiniBand modules will open the InfiniBand UI.


[InfiniBand 1]
Status
Voltage and Temperature
28C / 82F
80
Board
1.44
1.52
1.76
VVDD
2.97
3.31
3.63
3.3V Aux
1.08
1.19
1.32
1.2 V
1.62
1.76
1.98
1.8 V
2.97
3.31
3.63
3.3 V
Power Control
Power On
Power Off
Reset

Power Status: On

Initialized: OK

VVDD: Normal

3.3V AUX: Normal

1.2V: Normal

1.8V: Normal

3.3V: Normal

Temperature: Normal

Status

Power Status: Shows the current InfiniBand power status.

Initialized: Indicates that the InfiniBand has been initialized.

VVDD: Shows the VVDD status of the InfiniBand.

3.3V Aux: Shows the 3.3 V Aux status.

1.2V: Shows the 1.2 V status.

1.8V: Shows the 1.8 V status.

3.3V: Shows the 3.3 V status.

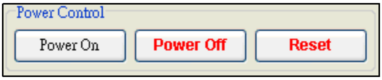
Temperature: Shows the temperature status.

Power Control

Power On: Click to turn on the InfiniBand module.

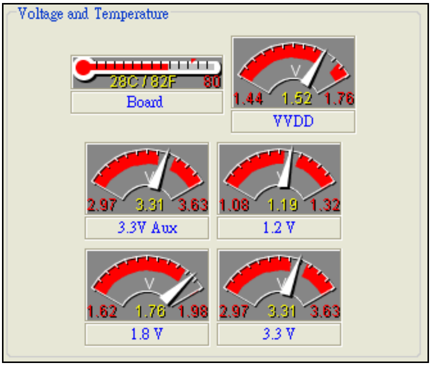
Power Off: Click to turn off the InfiniBand module.

Reset: Click to reset the InfiniBand module.

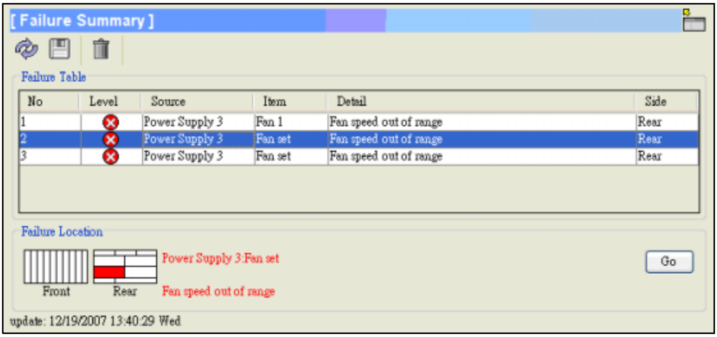

Power Control
Power On
Power Off
Reset

Voltage and Temperature

Shows the readout of the current InfiniBand voltages and temperature. Specifically, these are VVDD, 3.3V Aux, 1.2V, 1.8V, 3.3V and board temperature.


Voltage and Temperature
28C / 82F
80
Board
1.44 1.52 1.76
VVDD
2.97 3.31 3.63
3.3V Aux
1.08 1.19 1.32
1.2 V
1.62 1.76 1.98
1.8 V
2.97 3.31 3.63
3.3 V

Failure Summary



No	Level	Source	Item	Detail	Side
1	⊗	Power Supply 3	Fan 1	Fan speed out of range	Rear
2	⊗	Power Supply 3	Fan set	Fan speed out of range	Rear
3	⊗	Power Supply 3	Fan set	Fan speed out of range	Rear

Power Supply 3:Fan set

Fan speed out of range

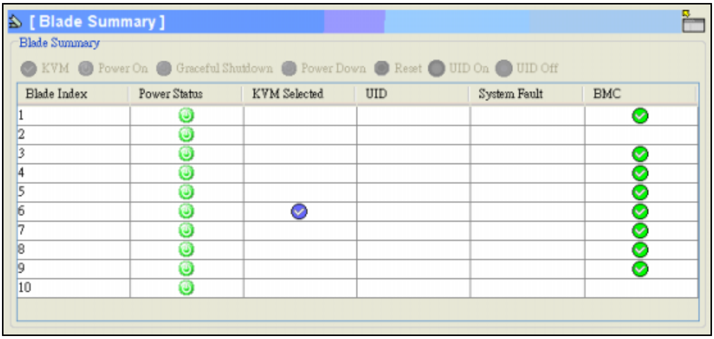
update: 12/19/2007 13:40:29 Wed

The Failure Summary is a list of failures that occurred in the blade server. The failure table shows the failure level, source, item, detail and side info of the failure item. The failure location shows the exact module and position. click **Go** to switch the UI to the highlighted failed module.

Clcik **Refresh** to refresh the failure table. Click the **Save** button to save the current failure table as a CSV text file. Click the **Clear** button to clear the failure items in the current table.

Note: If a failure still exists, it will be displayed the next time you refresh the table.

Blade Summary

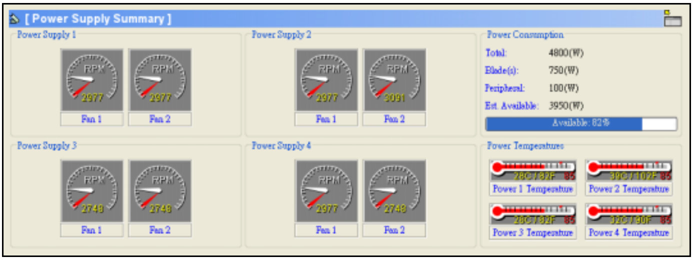

[Blade Summary]
Blade Summary
KVM
Power On
Graceful Shutdown
Power Down
Reset
UID On
UID Off

Blade Index	Power Status	KVM Selected	UID	System Fault	BMC
1	●				✓
2	●				
3	●				✓
4	●				✓
5	●				✓
6	●	✓			✓
7	●				✓
8	●				✓
9	●				✓
10	●				

The Blade Summary gives an overview of all blade systems installed in the blade server. The summary table has symbols for Power Status, KVM Selected, ID, System Fault and BMC status. A group management feature is also included. You can select multiple blades and send commands to perform power on, graceful shutdown, power down, reset, ID on and ID off functions by clicking the corresponding button.

Note: The KVM function supports one blade system at a time.

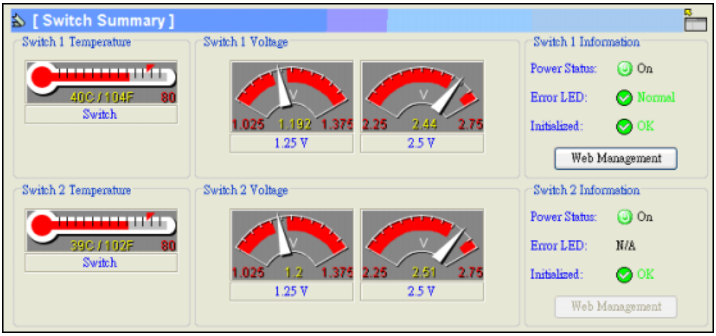
Power Supply Summary UI


[Power Supply Summary]
Power Supply 1
RPM
2977
Fan 1
RPM
2977
Fan 2
Power Supply 2
RPM
2977
Fan 1
RPM
3091
Fan 2
Power Supply 3
RPM
2748
Fan 1
RPM
2748
Fan 2
Power Supply 4
RPM
2977
Fan 1
RPM
2748
Fan 2
Power Consumption
Available: 82%
Power Temperatures
28C / 82F 85
Power 1 Temperature
39C / 102F 85
Power 2 Temperature
28C / 82F 85
Power 3 Temperature
32C / 90F 85
Power 4 Temperature

Total: 4800(W)
Blade(s): 750(W)
Peripheral: 100(W)
Est. Available: 3950(W)

The Power Supply Summary gives an overview of all installed power supplies. You can view the power supply fan and temperature status at a glance. Power Consumption shows an estimation of the power (wattage) use. *Total Power* is the total power provided by all installed power supplies currently turned on. *Power Reserved* is an estimation of the power being drawn by all blade systems. *Available* is the amount of power that remains available to the system. If the available wattage is insufficient, it may not be possible to turn on additional blade systems.

Switch Summary UI


[Switch Summary]
Switch 1 Temperature
40C / 104F
80
Switch
Switch 1 Voltage
V
1.025
1.192
1.375
1.25 V
V
2.25
2.44
2.75
2.5 V
Switch 1 Information
Web Management
Switch 2 Temperature
39C / 102F
80
Switch
Switch 2 Voltage
V
1.025
1.2
1.375
1.25 V
V
2.25
2.51
2.75
2.5 V
Switch 2 Information
Web Management

Switch 1 Information

Power Status: On

Error LED: Normal

Initialized: OK

Switch 2 Information

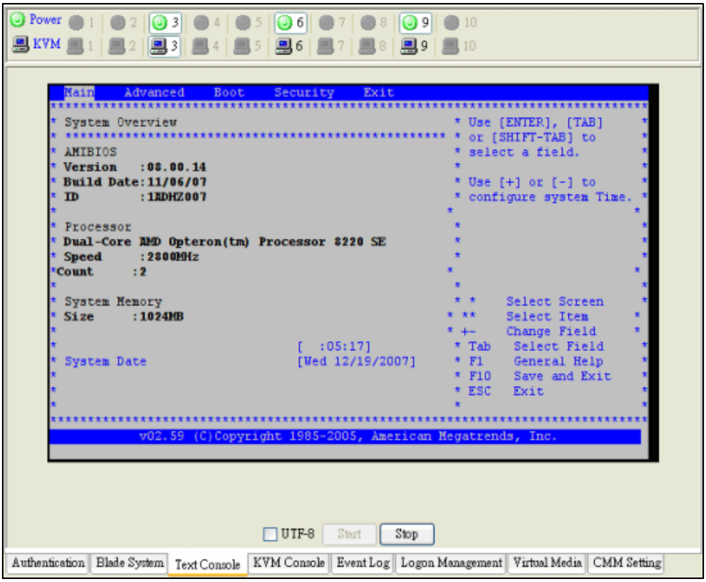
Power Status: On

Error LED: N/A

Initialized: OK

The Switch Summary gives an overview of up to two Acer switch (or gigabit pass thru) modules. You can see the voltages, temperatures and switch status in a single view. Click **Web Management** to open a browser that is linked directly to the IP.

Text Console

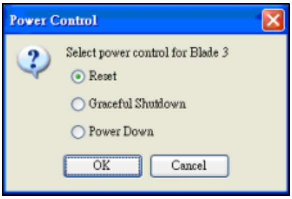

Power
1
2
3
4
5
6
7
8
9
10
KVM
1
2
3
4
5
6
7
8
9
10
☐ UTF-8
Start
Stop
Authentication
Blade System
Text Console
KVM Console
Event Log
Logon Management
Virtual Media
CMM Setting

```
  Main      Advanced    Boot    Security    Exit
*****************************************************************************
* System Overview                                    * Use [ENTER], [TAB]   *
* ************************************************** * or [SHIFT-TAB] to    *
* AMIBIOS                                            * select a field.      *
* Version    :08.00.14                               *                      *
* Build Date:11/06/07                                * Use [+] or [-] to    *
* ID         :1ADHZ007                               * configure system Time. *
*                                                   *                      *
* Processor                                          *                      *
* Dual-Core AMD Opteron(tm) Processor 8220 SE        *                      *
* Speed      :2800MHz                                *                      *
*Count      :2                                      *                      *
*                                                    *                      *
* System Memory                                      * *     Select Screen  *
* Size      :1024MB                                 * **     Select Item   *
*                                                   * +-     Change Field  *
*                                  [  :05:17]        * Tab   Select Field   *
* System Date                      [Wed 12/19/2007]  * F1    General Help   *
*                                                    * F10   Save and Exit  *
*                                                    * ESC   Exit           *
*                                                    *                      *
*****************************************************************************
          v02.59 (C)Copyright 1985-2005, American Megatrends, Inc.
```

The Text Console (SOL) is a basic function of IPMI and provided by Server. Click the **Text Console** tab to open the UI. click **Start** at the bottom to initialize the text console connection. The UTF-8 checkbox allows you to select a different UTF-8 character set to support multiple languages. Click **Stop** to stop the text console.

At the top are the Power and KVM control panels for the blade systems. The power button can perform a power on, reset, graceful shutdown and power down function on the selected blade system. The power button icon indicates the current blade system power status: green for on and amber for off. The KVM icon shows which blade system has KVM active. Select another blade system KVM button to connect to its text console.

When a blade system is turned on you can click the power button to perform a power function on the module: reset, graceful shutdown and power down. When a blade system is turned off, pressing the power button will turn on the blade system.


Power Control
OK
Cancel

Select power control for Blade 3

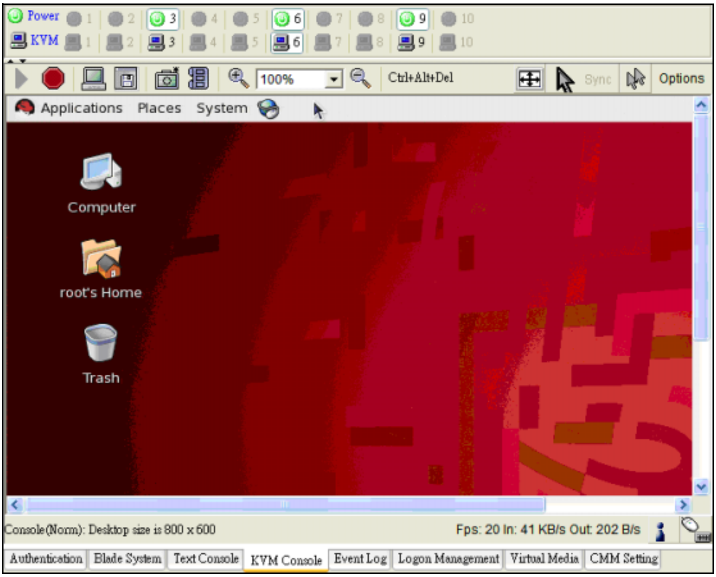
● Reset

○ Graceful Shutdown

○ Power Down

KVM console

The KVM Console provides a remote desktop. This feature allows you to remotely manipulate a blade system's UI. The **KVM Console** tab has blade power and KVM control panels that offer the same functions as those in the Text Console tab.

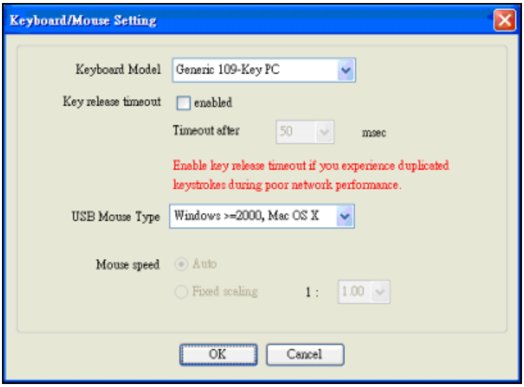

Power 1 2 3 4 5 6 7 8 9 10
KVM 1 2 3 4 5 6 7 8 9 10
100%
Ctrl+Alt+Del
Sync
Options
Applications
Places
System
Computer
root's Home
Trash
Authentication
Blade System
Text Console
KVM Console
Event Log
Logon Management
Virtual Media
CMM Setting

Console (Norm): Desktop size is 800 x 600

Fps: 20 In: 41 KB/s Out: 202 B/s

In the video console panel, you will see the remote desktop of the selected blade system. Selecting another blade system in the control panel will switch the display to the selected blade.

Note: The keyboard/mouse may behave differently on different operating systems. Select **Options** > **Keyboard/Mouse Settings...** to change the keyboard and mouse settings.



Keyboard Model: Generic 109-Key PC

Key release timeout: ☐ enabled

Timeout after: 50 msec

Enable key release timeout if you experience duplicated keystrokes during poor network performance.

USB Mouse Type: Windows >=2000, Mac OS X

Mouse speed: ● Auto ○ Fixed scaling 1 : 1.00

Keyboard Model: Click the arrow for the pull-down menu to specify the keyboard type.

Key Release Timeout: Check this box to enable the Key Release Timeout function, which will set a time limit for a key press.

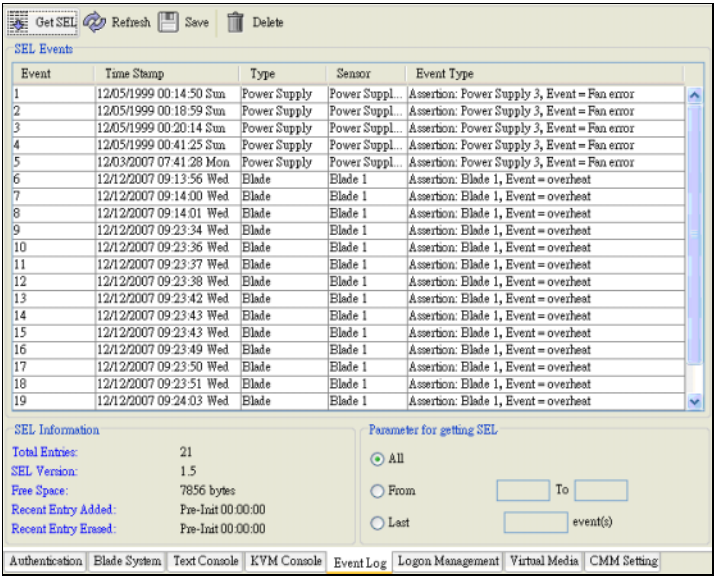
Timeout: If the Key Release Timeout function has been enabled, click on the arrow to select the timeout setting from the pull-down menu.

USB Mouse Type: For a USB mouse to function properly, you need to select the correct operating system for your system from the pull-down menu. Options are **Windows, Mac** and **Other Operating System**. For Linux, please select **Other Operating System**.

Mouse Speed Auto: Click the checkbox to allow your system to automatically set the mouse speed.

Mouse Speed Fixed scaling: You can also check the Fixed Scaling checkbox and manually set the mouse speed using a pull-down menu.

Event Log



SEL Events

Event	Time Stamp	Type	Sensor	Event Type
1	12/05/1999 00:14:50 Sun	Power Supply	Power Suppl...	Assertion: Power Supply 3, Event = Fan error
2	12/05/1999 00:18:59 Sun	Power Supply	Power Suppl...	Assertion: Power Supply 3, Event = Fan error
3	12/05/1999 00:20:14 Sun	Power Supply	Power Suppl...	Assertion: Power Supply 3, Event = Fan error
4	12/05/1999 00:41:25 Sun	Power Supply	Power Suppl...	Assertion: Power Supply 3, Event = Fan error
5	12/03/2007 07:41:28 Mon	Power Supply	Power Suppl...	Assertion: Power Supply 3, Event = Fan error
6	12/12/2007 09:13:56 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
7	12/12/2007 09:14:00 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
8	12/12/2007 09:14:01 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
9	12/12/2007 09:23:34 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
10	12/12/2007 09:23:36 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
11	12/12/2007 09:23:37 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
12	12/12/2007 09:23:38 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
13	12/12/2007 09:23:42 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
14	12/12/2007 09:23:43 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
15	12/12/2007 09:23:43 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
16	12/12/2007 09:23:49 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
17	12/12/2007 09:23:50 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
18	12/12/2007 09:23:51 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat
19	12/12/2007 09:24:03 Wed	Blade	Blade 1	Assertion: Blade 1, Event = overheat

SEL Information

Total Entries: 21
SEL Version: 1.5
Free Space: 7856 bytes
Recent Entry Added: Pre-Init 00:00:00
Recent Entry Erased: Pre-Init 00:00:00

Parameter for getting SEL

● All
○ From ____ To ____
○ Last ____ event(s)

Acer blade servers log system events using standard IPMI formats. To see the event logs, click the **Event Log** tab. Initially only SEL information will be loaded. This displays Total Entries, SEL Version, Free Space, Recent Entry Added and Recent Entry Erased.

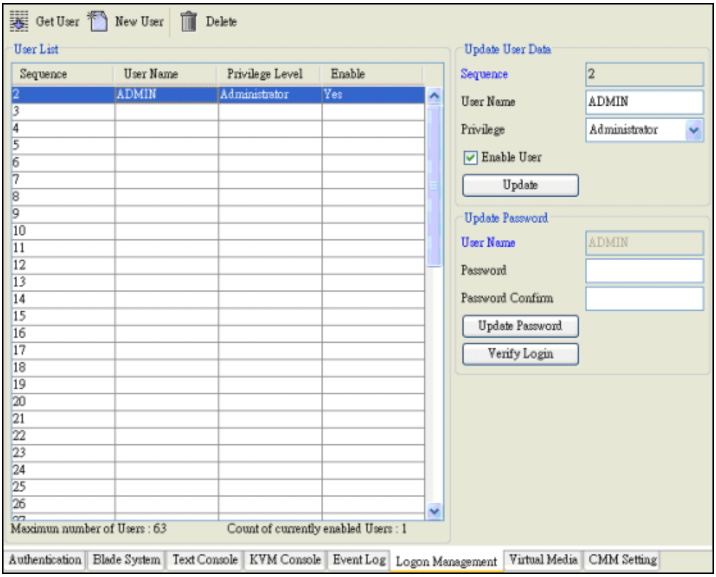
In the **Parameters for getting SEL** window, the default is All to get the entire SEL log. This may be changed to From ____ to End ____ or to the last number of the SEL. After entering the parameters, click **Get SEL** button on the tool bar to start loading SEL.

The SEL events table categorizes events with Time Stamp, Type, Sensor and Event Type details. The maximum number of SEL table entries is 512. If this number is exceeded, you may click the **Save** button to save the logs to a backup file. Click the **Delete** button to delete all SEL events.

Note: The Refresh button only refreshes the SEL information. To reload SEL, please click **Get SEL**.

Logon Management

The **Logon Management** tab displayes up to 63 user accounts. Click **Get User** button to retrieve the current user list. Each user has a *User Name*, *Privilege Level* and *Enable* field.


Get User
New User
Delete
User List
Update User Data
Update
Update Password
Update Password
Verify Login
Authentication
Blade System
Text Console
KVM Console
Event Log
Logon Management
Virtual Media
CMM Setting

Sequence	User Name	Privilege Level	Enable
2	ADMIN	Administrator	Yes
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			

Maximum number of Users : 63
Count of currently enabled Users : 1

Sequence: 2
User Name: ADMIN
Privilege: Administrator
☑ Enable User

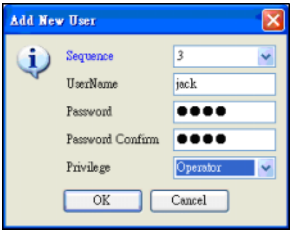
User Name: ADMIN
Password:
Password Confirm:

The Privilege Level will be one of the following:

- Administrator - able to access all functions.
- Operator - all functions except logon management accessible.
- User - limited functions accessible. Unavailable functions will be hidden or disabled.
- CallBack.

If the *Enable* field reads **No**, it means the user cannot log in to the blade server. The administrator can change the field to Yes to allow the user to log in.

To create a new user, dick **New User**. A New User dialog box opens and allows the adminstrator to enter the required information.



Sequence: 3
UserName: jack
Password: ●●●●
Password Confirm: ●●●●
Privilege: Operator

Sequence specifies the users place in the list. Enter the UserName, Password, Password Confirm and Privilege level. Click **OK** to create the new user.

To delete a user, select the user from the user list table and click **Delete**.

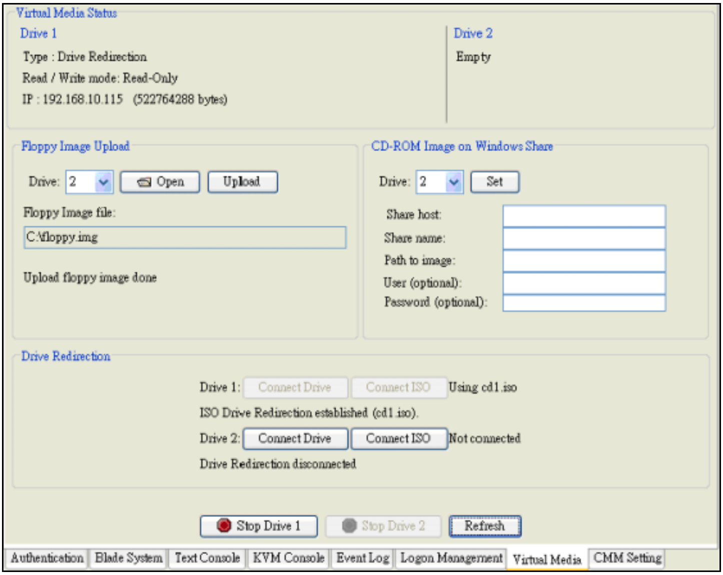
To edit user data, select the user from the user list table. The user data will be shown in the right-hand panel. In the *Update User Data* area, you can edit the User Name and Privilege level. The Enable User checkbox is used to enable or disable login by a user.

In the *Update Password* area, you can update the user's password. Click **Update Password** after entering and confirming the new password.

Note: It’s a good idea to click **Verify Login** to ensure the password was updated. This is also helpful to check that the new user was created.

Click **Verify Login** to open a login window, enter the username and Password that you want to verify. Click **OK** to open a dialog box informing you of success or failure.

Virtual Media



Virtual Media Status

Drive 1

Type : Drive Redirection

Read / Write mode: Read-Only

IP : 192.168.10.115 (522764288 bytes)

Drive 2

Empty

Floppy Image Upload

Drive: 2

Floppy Image file: C:\floppy.img

Upload floppy image done

CD-ROM Image on Windows Share

Drive: 2

Share host:

Share name:

Path to image:

User (optional):

Password (optional):

Drive Redirection

Drive 1: Using cd1.iso

ISO Drive Redirection established (cd1.iso).

Drive 2: Not connected

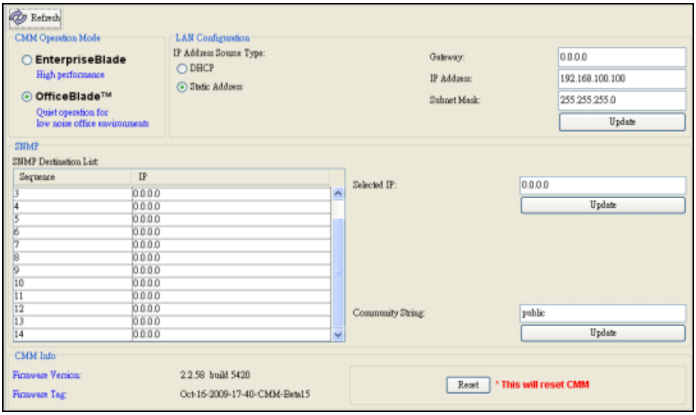
Drive Redirection disconnected

Open
Upload
Set
Connect Drive
Connect ISO
Connect Drive
Connect ISO
Stop Drive 1
Stop Drive 2
Refresh
Authentication
Blade System
Text Console
KVM Console
Event Log
Logon Management
Virtual Media
CMM Setting

The CMM module supports the use of two virtual drives with the same function as a SIM IPMI device.

Note: The virtual drive in the CMM module will be dedicated to the blade system currently selected for KVM.

CMM Setting



○ EnterpriseBlade
High performance

● OfficeBlade™
Quiet operation for
low noise office environments

IP Address Source Type:
○ DHCP
● Static Address

Gateway: 0.0.0.0
IP Address: 192.168.100.100
Subnet Mask: 255.255.255.0

SNMP Destination List

Sequence	IP
3	0.0.0.0
4	0.0.0.0
5	0.0.0.0
6	0.0.0.0
7	0.0.0.0
8	0.0.0.0
9	0.0.0.0
10	0.0.0.0
11	0.0.0.0
12	0.0.0.0
13	0.0.0.0
14	0.0.0.0

Selected IP: 0.0.0.0

Community String: public

Firmware Version: 2.2.58 build 5420
Firmware Tag: Oct-16-2009-17-40-CMM-Beta15

* This will reset CMM

The CMM Setting tab provides LAN configuration, SNMP setting and CMM information.

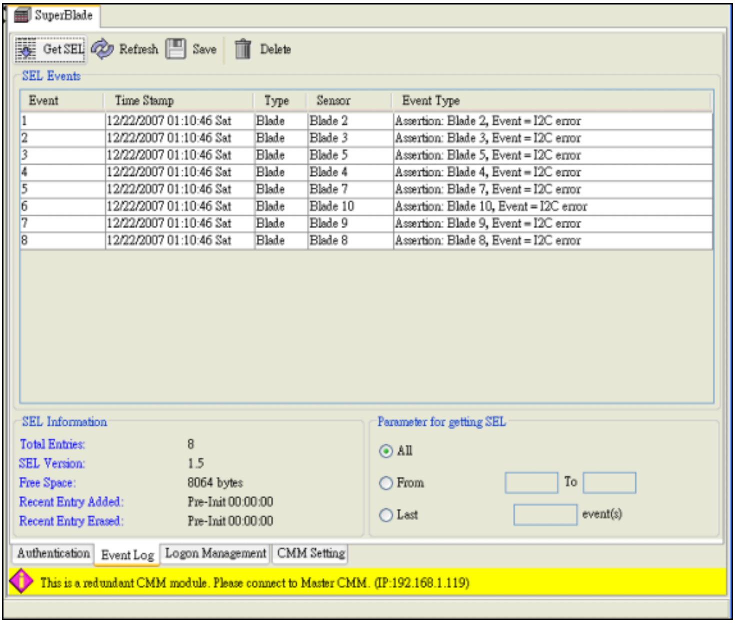
LAN Configuration: Shows the current CMM IP address, Acer and Subnet Mask. The CMM IP type can be set as a DHCP or static address.

SNMP: Lets you specify the SNMP destination address to receive the SNMP trap from the CMM. When the CMM detects a failure, it logs into SEL and immediately sends the SNMP trap to the specified addresses. Update the SNMP destinations by selecting one from the SNMP list. The selected SNMP will then appear in the text field of the Selected IP. Update the SNMP destination by clicking **Update**. The Community String of the SNMP trap can also be updated.

CMM Info: Shows the firmware version and tag.

The Reset button can be used to reset the CMM. You may also view the information and commands in the CMM module via the Blade System tab.

Connecting to the Slave CMM


SuperBlade
Get SEL
Refresh
Save
Delete
SEL Events
SEL Information
Parameter for getting SEL
● All
○ From
To
○ Last
event(s)
Authentication
Event Log
Logon Management
CMM Setting

Event	Time Stamp	Type	Sensor	Event Type
1	12/22/2007 01:10:46 Sat	Blade	Blade 2	Assertion: Blade 2, Event = I2C error
2	12/22/2007 01:10:46 Sat	Blade	Blade 3	Assertion: Blade 3, Event = I2C error
3	12/22/2007 01:10:46 Sat	Blade	Blade 5	Assertion: Blade 5, Event = I2C error
4	12/22/2007 01:10:46 Sat	Blade	Blade 4	Assertion: Blade 4, Event = I2C error
5	12/22/2007 01:10:46 Sat	Blade	Blade 7	Assertion: Blade 7, Event = I2C error
6	12/22/2007 01:10:46 Sat	Blade	Blade 10	Assertion: Blade 10, Event = I2C error
7	12/22/2007 01:10:46 Sat	Blade	Blade 9	Assertion: Blade 9, Event = I2C error
8	12/22/2007 01:10:46 Sat	Blade	Blade 8	Assertion: Blade 8, Event = I2C error

Total Entries: 8
SEL Version: 1.5
Free Space: 8064 bytes
Recent Entry Added: Pre-Init 00:00:00
Recent Entry Erased: Pre-Init 00:00:00

This is a redundant CMM module. Please connect to Master CMM. (IP:192.168.1.119)

If you have installed two CMMs in one blade server, one should be assigned as the master CMM and the other as the slave CMM. You should connect to the master CMM for management purposes. However, you may also connect to the slave CMM to check event logs, manage login information and change CMM settings.

At the bottom is a yellow message bar showing that you are currently connected to the slave (redundant) CMM and telling you to connect to the master CMM. You may refer to the master CMM IP address given to connect to the master CMM.

Appendix A: Troubleshooting

BIOS POST Messages

During the Power-On Self-Test (POST), the BIOS will check for problems. If a problem is found, the BIOS will activate an alarm or display a message. The following is a list of such BIOS messages.

BIOS Message	Description
Failure Fixed Disk	Fixed disk is not working or not configured properly. Check to see if fixed disk is attached properly. Run Setup. Find out if the fixed-disk type is correctly identified.
Stuck key	Stuck key on keyboard.
Keyboard error	Keyboard not working.
Keyboard Controller Failed	Keyboard controller failed test. May require replacing keyboard controller.
Keyboard locked - Unlock key switch	Unlock the system to proceed.
Monitor type does not match CMOS - Run SETUP	Monitor type not correctly identified in Setup
Shadow Ram Failed at offset: nnnn	Shadow RAM failed at offset nnnn of the 64k block at which the error was detected.
System RAM Failed at offset: nnnn	System RAM failed at offset nnnn of in the 64k block at which the error was detected.
Extended RAM Failed at offset: nnnn	Extended memory not working or not configured properly at offset nnnn.
System battery is dead - Replace and run SETUP	The CMOS clock battery indicator shows the battery is dead. Replace the battery and run Setup to reconfigure the system.

BIOS Message	Description
System CMOS checksum bad - Default configuration used	System CMOS has been corrupted or modified incorrectly, perhaps by an application program that changes data stored in CMOS. The BIOS installed Default Setup Values. If you do not want these values, enter Setup and enter your own values. If the error persists, check the system battery or contact your dealer.
System timer error	The timer test failed. Requires repair of system board.
Real time clock error	Real-Time Clock fails BIOS hardware test. May require board repair.
Check date and time settings	BIOS found date or time out of range and reset the Real-Time Clock. May require setting legal date (1991-2099).
Previous boot incomplete - Default configuration used	Previous POST did not complete successfully. POST loads default values and offers to run Setup. If the failure was caused by incorrect values and they are not corrected, the next boot will likely fail. On systems with control of **wait states**, improper Setup settings can also terminate POST and cause this error on the next boot. Run Setup and verify that the waitstate configuration is correct. This error is cleared the next time the system is booted.
Memory Size found by POST differed from CMOS	Memory size found by POST differed from CMOS.
Diskette drive A error Diskette drive B error	Drive A: or B: is present but fails the BIOS POST diskette tests. Check to see that the drive is defined with the proper diskette type in Setup and that the diskette drive is attached correctly.
Incorrect Drive A type - run SETUP	Type of floppy drive A: not correctly identified in Setup.
Incorrect Drive B type - run SETUP	Type of floppy drive B: not correctly identified in Setup.

BIOS Message	Description
System cache error - Cache disabled	RAM cache failed and BIOS disabled the cache. On older boards, check the cache jumpers. You may have to replace the cache. See your dealer. A disabled cache slows system performance considerably.
CPU ID:	CPU socket number for Multi-Processor error.
EISA CMOS not writeable	ServerBIOS2 test error: Cannot write to EISA CMOS.
DMA Test Failed	ServerBIOS2 test error: Cannot write to extended DMA (Direct Memory Access) registers.
Software NMI Failed	ServerBIOS2 test error: Cannot generate software NMI (Non-Maskable Interrupt).
Fail-Safe Timer NMI Failed	ServerBIOS2 test error: Fail-Safe Timer takes too long.
device Address Conflict	Address conflict for specified device.
Allocation Error for: device	Run ISA or EISA Configuration Utility to resolve resource conflict for the specified device.
CD ROM Drive	CD ROM Drive identified.
Entering SETUP...	Starting Setup program
Failing Bits: nnnn	The hex number nnnn is a map of the bits at the RAM address which failed the memory test. Each 1 (one) in the map indicates a failed bit. See errors 230, 231, or 232 above for offset address of the failure in System, Extended, or Shadow memory.
Fixed Disk n	Fixed disk n (0-3) identified.
Invalid System Configuration Data	Problem with NVRAM (CMOS) data.
I/O device IRQ conflict	I/O device IRQ conflict error.

BIOS Message	Description
PS/2 Mouse Boot Summary Screen:	PS/2 Mouse installed.
nnnn kB Extended RAM Passed	Where **nnnn** is the amount of RAM in kilobytes successfully tested.
nnnn Cache SRAM Passed	Where **nnnn** is the amount of system cache in kilobytes successfully tested.
nnnn kB Shadow RAM Passed	Where **nnnn** is the amount of shadow RAM in kilobytes successfully tested.
nnnn kB System RAM Passed	Where **nnnn** is the amount of system RAM in kilobytes successfully tested.
One or more I2O Block Storage Devices were excluded from the Setup Boot Menu	There was not enough room in the IPL table to display all installed I2O block-storage devices.
Operating system not found	Operating system cannot be located on either drive A: or drive C:. Enter Setup and see if fixed disk and drive A: are properly identified.
Parity Check 1 nnnn	Parity error found in the system bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays **????**. Parity is a method for checking errors in binary data. A parity error indicates that some data has been corrupted.
Parity Check 2 nnnn	Parity error found in the I/O bus. BIOS attempts to locate the address and display it on the screen. If it cannot locate the address, it displays **????**.
Press <F1> to resume, <F2> to Setup, <F3> for previous	Displayed after any recoverable error message. Press <F1> to start the boot process or <F2> to enter Setup and change the settings. Press <F3> to display the previous screen (usually an initialization error of an **Option ROM**, i.e., an add-on card). Write down and follow the information shown on the screen.

BIOS Message	Description
Press <F2> to enter Setup	Optional message displayed during POST. Can be turned off in Setup.
PS/2 Mouse:	PS/2 mouse identified.
Run the I2O Configuration Utility	One or more unclaimed block storage devices have the Configuration Request bit set in the LCT. Run an I2O Configuration Utility (e.g. the SAC utility).
System BIOS shadowed	System BIOS copied to shadow RAM.
UMB upper limit segment address: *nnnn*	Displays the address ***nnnn*** of the upper limit of Upper Memory Blocks, indicating released segments of the BIOS which can be reclaimed by a virtual memory manager.
Video BIOS shadowed	Video BIOS successfully copied to shadow RAM.

BIOS POST Codes

This section lists the POST (Power-On Self-Test) codes for the AMI BIOS. POST codes are divided into two categories: recoverable and terminal.

Recoverable POST Errors

When a recoverable type of error occurs during POST, the BIOS will display an POST code that describes the problem. BIOS may also issue one of the following beep codes:

- **One long and two short beeps** – video configuration error
- **One repetitive long beep** – no memory detected

Terminal POST Errors

If a terminal type of error occurs, BIOS will shut down the system. Before doing so, BIOS will write the error to *port 80h*, attempt to initialize video and write the error in the top left corner of the screen.

The following is a list of codes that may be written to *port 80h*.

Post Code	Description
02h	Verify Real Mode
03h	Disable Non-Maskable Interrupt (NMI)
04h	Get CPU type
06h	Initialize system hardware
07h	Disable shadow and execute code from the ROM.
08h	Initialize chipset with initial POST values
09h	Set IN POST flag
0Ah	Initialize CPU registers
0Bh	Enable CPU cache
0Ch	Initialize caches to initial POST values

Post Code	Description
0Eh	Initialize I/O component
0Fh	Initialize the local bus IDE
10h	Initialize Power Management
11h	Load alternate registers with initial POST values
12h	Restore CPU control word during warm boot
13h	Initialize PCI Bus Mastering devices
14h	Initialize keyboard controller
16h	1-2-2-3 BIOS ROM checksum
17h	Initialize cache before memory Auto size
18h	8254 timer initialization
1Ah	8237 DMA controller initialization
1Ch	Reset Programmable Interrupt Controller
20h	1-3-1-1 Test DRAM refresh
22h	1-3-1-3 Test 8742 Keyboard Controller
28h	Auto size DRAM
29h	Initialize POST Memory Manager
2Ah	Clear 512 kB base RAM
2Ch	1-3-4-1 RAM failure on address line ***xxxx****
2Eh	1-3-4-3 RAM failure on data bits ***xxxx**** of low byte of memory bus
2Fh	Enable cache before system BIOS shadow
32h	Test CPU bus-clock frequency
33h	Initialize Phoenix Dispatch Manager

Post Code	Description
36h	Warm start shut down
38h	Shadow system BIOS ROM
3Ah	Auto size cache
3Ch	Advanced configuration of chipset registers
3Dh	Load alternate registers with CMOS values
41h	Initialize extended memory for RomPilot
42h	Initialize interrupt vectors
45h	POST device initialization
46h	2-1-2-3 Check ROM copyright notice
47h	Initialize I20 support
48h	Check video configuration against CMOS
49h	Initialize PCI bus and devices
4Ah	Initialize all video adapters in system
4Bh	QuietBoot start (optional)
4Ch	Shadow video BIOS ROM
4Eh	Display BIOS copyright notice
4Fh	Initialize MultiBoot
50h	Display CPU type and speed
51h	Initialize EISA board
52h	Test keyboard
54h	Set key click if enabled
55h	Enable USB devices
58h	2-2-3-1 Test for unexpected interrupts

Post Code	Description
59h	Initialize POST display service
5Ah	Display prompt “Press F2 to enter SETUP”
5Bh	Disable CPU cache
5Ch	Test RAM between 512 and 640 kB
60h	Test extended memory
62h	Test extended memory address lines
64h	Jump to UserPatch1
66h	Configure advanced cache registers
67h	Initialize Multi Processor APIC
68h	Enable external and CPU caches
69h	Setup System Management Mode (SMM) area
6Ah	Display external L2 cache size
6Bh	Load custom defaults (optional)
6Ch	Display shadow-area message
6Eh	Display possible high address for UMB recovery
70h	Display error messages
72h	Check for configuration errors
76h	Check for keyboard errors
7Ch	Set up hardware interrupt vectors
7Dh	Initialize Intelligent System Monitoring
7Eh	Initialize coprocessor if present
80h	Disable onboard Super I/O ports and IRQs
81h	Late POST device initialization

Post Code	Description
82h	Detect and install external RS232 ports
83h	Configure non-MCD IDE controllers
84h	Detect and install external parallel ports
85h	Initialize PC-compatible PnP ISA devices
86h	Re-initialize onboard I/O ports.
87h	Configure Motherboard Configurable Devices (optional)
88h	Initialize BIOS Data Area
89h	Enable Non-Maskable Interrupts (NMIs)
8Ah	Initialize Extended BIOS Data Area
8Bh	Test and initialize PS/2 mouse
8Ch	Initialize floppy controller
8Fh	Determine number of ATA drives (optional)
90h	Initialize hard-disk controllers
91h	Initialize local-bus hard-disk controllers
92h	Jump to UserPatch2
93h	Build MPTABLE for multi-processor boards
95h	Install CD ROM for boot
96h	Clear huge ES segment register
98h	1-2 Search for option ROMs. One long, two short beeps on check-sum failure
99h	Check for SMART Drive (optional)
9Ah Sh	adow option ROMs
9Ch	Set up Power Management

Post Code	Description
9Dh	Initialize security engine (optional)
9Eh	Enable hardware interrupts
9Fh	Determine number of ATA and SCSI drives
A0h	Set time of day
A2h	Check key lock
A4h	Initialize typematic rate
A8h	Erase F2 prompt
AAh	Scan for F2 key stroke
ACh	Enter SETUP
AEh	Clear Boot flag
B0h	Check for errors
B1h	Inform RomPilot about the end of POST.
B2h	POST done - prepare to boot operating system
B4h	1 One short beep before boot
B5h	Terminate QuietBoot (optional)
B6h	Check password (optional)
B7h	Initialize ACPI BIOS
B9h	Prepare Boot
BAh	Initialize SMBIOS
BBh	Initialize PnP Option ROMs
BCh	Clear parity checkers
BDh	Display MultiBoot menu
BEh	Clear screen (optional)

Post Code	Description
BFh	Check virus and backup reminders
C0h	Try to boot with INT 19
C1h	Initialize POST Error Manager (PEM)
C2h	Initialize error logging
C3h	Initialize error display function
C4h	Initialize system error handler
C5h	PnPnd dual CMOS (optional)
C6h	Initialize note dock (optional)
C7h	Initialize note dock late
C8h	Force check (optional)
C9h	Extended checksum (optional)
CAh	Redirect Int 15h to enable remote keyboard
CBh	Redirect Int 13h to Memory Technologies Devices such as ROM, RAM, PCMCIA, and serial disk
CCh	Redirect Int 10h to enable remote serial video
CDh	Re-map I/O and memory for PCMCIA
CEh	Initialize digitizer and display message
D2h U	nknown interrupt

The following are for the boot block in Flash ROM:

Post Code	Description
E0h	Initialize the chipset
E1h	Initialize the bridge

Post Code	Description
E2h	Initialize the CPU
E3h	Initialize system timer
E4h	Initialize system I/O
E5h	Check force recovery boot
E6h	Checksum BIOS ROM
E7h Go	to BIOS
E8h	Set Huge Segment
E9h	Initialize Multi Processor
EAh	Initialize OEM special code
EBh	Initialize PIC and DMA
ECh Initialize	Memory type
EDh Initialize	Memory size
EEh	Shadow Boot Block
EFh	System memory test
F0h	Initialize interrupt vectors
F1h	Initialize Run Time Clock
F2h Initialize	video
F3h	Initialize System Management Manager
F4h	Output one beep
F5h	Clear Huge Segment
F6h	Boot to Mini DOS
F7h	Boot to Full DOS

If the BIOS detects error 2C, 2E, or 30 (base 512K RAM error), it displays an additional word-bitmap (*xxxx*) indicating the address line or bits that failed. For example, “2C 0002” means address line 1 (bit one set) has failed. “2E 1020" means data bits 12 and 5 (bits 12 and 5 set) have failed in the lower 16 bits. The BIOS also sends the bitmap to the port-80 LED display. It first displays the checkpoint code, followed by a delay, the high-order byte, another delay, and then the low order byte of the error. It repeats this sequence continuously.

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